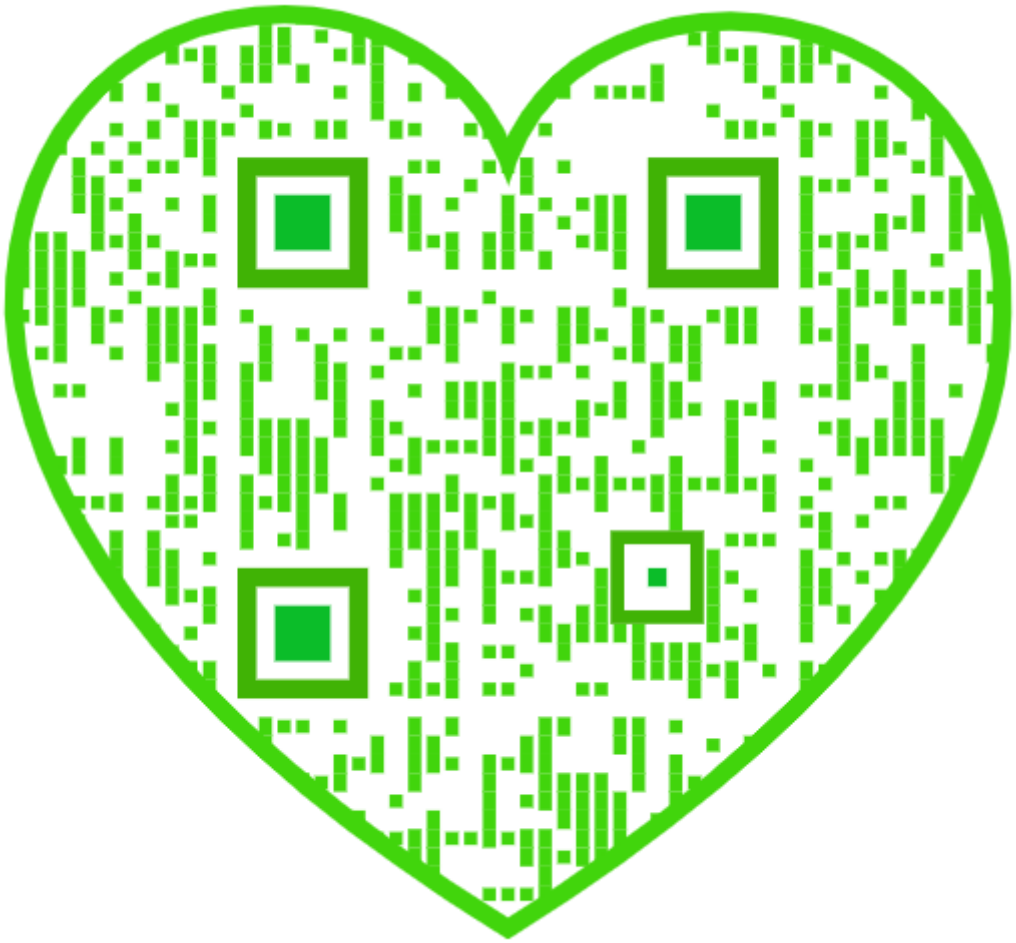

THE

PRINCIPLES

OF

ECONOMICAL PHILOSOPHY.

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THE

PRINCIPLES

OF

ECONOMICAL PHILOSOPHY.

BY

HENRY DUNNING MACLEOD, Esq., M.A.,

OF TRINITY COLLEGE, CAMBRIDGE, AND THE INNER TEMPLE; BARRISTER-AT-LAW;
FELLOW OF THE CAMBRIDGE PHILOSOPHICAL SOCIETY.

Ne nous imaginons pas que le vrai soit victorieux dès qu'il se montre;
il l'est à la fin, mais il lui faut du temps pour soumettre les esprits.
FONTENELLE; VIE DE CORNEILLE.

SECOND EDITION.

VOLUME I.

LONDON:
LONGMANS, GREEN, READER, AND DYER.

1872.

THE AUTHOR RESERVES THE RIGHT OF TRANSLATION.

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TO

MICHEL CHEVALIER,

MEMBER OF THE INSTITUTE OF FRANCE,
PROFESSOR OF POLITICAL ECONOMY IN THE COLLEGE DE FRANCE.

My Dear Chevalier,

It is with the most heartfelt pleasure that I inscribe this work with your name.

I shall never forget the generous warmth with which you expressed your approval of its principles, when years ago, I, a perfect stranger, submitted it to you, as one of the greatest living masters of the Science. I shall ever feel honored by the constant public support you have given me, and especially by your Report on my Works to the Institute of France.

There is another reason why I love to link your name with this book. In one of his last letters, your illustrious friend, Frederic Bastiat,—the brightest genius who ever adorned our Science—says that he only longed to be assured, before he died, that his book should call forth another.

My work was written before I had even heard of his name; but when I read his works for the first time, to give an account of them in my *Dictionary*, I was surprised and delighted to find that he had anticipated me on almost every point; and that I was unconsciously re-constructing the Science on his principles.

No one can feel more sensibly than I do how inferior I am to your lamented friend in literary skill: but our Ideas are the

same; and I venture to say, with confidence, that had he been living now, there would have been no material difference between us on any point.

No words of mine can add to your well-earned fame. But History will record your unceasing efforts to promote the knowledge of true Economic Science—the surest basis of the prosperity of nations—in your country, and the part you played in negotiating the Commercial Treaty of 1860. History will record the noble stand which you, alone in the Senate of the falling Empire, made against that fatal policy which has brought such unheard of calamities on the pleasant land of France. Would that she had listened then to the wisdom of your counsels! Would that she would listen to you now! For her best hope of recovery lies in her learning and adopting those principles of Economics which you have so eloquently defended.

Believe me to be,

Ever affectionately yours,

HENRY DUNNING MACLEOD.

LONDON,

December 1*st*, 1872.

PREFACE

TO THE

SECOND EDITION.

When an author wishes to shew that the view of a science most popularly held is erroneous, and that he has a better one to offer, it is an act of mere justice to himself to lay before his readers a simple statement of the facts upon which he rests his claim to their confidence.

In the year 1847, when I was reading as a pupil in the chambers of my ever-lamented friend Mr. Bullen, whose memory will long be dear to many in the profession, the administration of the Poor Law was felt to be very unsatisfactory in many parts of Scotland. The district of Easter Ross, in which I resided, consisting of nine parishes, appointed a Committee to consider what should be done. This Committee elected me, as representing my father, the largest proprietor in the district, to be their Chairman, and it devolved upon me to devise an improved system of Poor Law Relief. The question being perfectly novel was naturally surrounded by many difficulties, legal and economical. Having devised a system which I thought suitable to the circumstances of the district, I had next to satisfy myself and others that there were sufficient legal powers to enforce it. The Scotch Poor Law consists of a few Acts and Proclamations passed in the 16th and 17th centuries, which were then generally supposed to be obsolete, and had very little practical effect, and the then recently passed Poor Law Amendment Act of 1845. Having carefully investigated these various Acts and Proclama-

tions, I was satisfied that, taken collectively, they contained sufficient powers to carry out the system I wished to enforce. I drew up the Report for the Committee, and the district, in reliance on the case I had prepared for them, unanimously adopted the system I proposed, and it proved to be perfectly successful. In consequence of this success the Poor Law Board of Scotland requested me to draw up an account of it, to be laid by them, in their Report, before Parliament. This Report of mine is contained in the Appendix to their Seventh Annual Report, for 1852, and in their Report the Board said—

"We have also printed in the Appendix a very full and lucid statement, for which we are indebted to Mr. H. D. Macleod, of the circumstances which led to the formation of the Easter Ross Poorhouse combination, chiefly under his guidance, and of the results that have been obtained by it. This communication, besides the interest attaching to it from its general bearing on the question of the expediency of erecting Poorhouses for rural Parishes in Scotland, has a particular value from the nearer approximation of the social condition of the inhabitants in Easter Ross to that of the population in the Highland districts, than will be found in any other part of the country, where the effects of a Poorhouse have been tried."

On a subsequent occasion Mr. Smythe, of Methven Castle, Perthshire, the Secretary to the Board, stated:—

"Your industry and talents became especially known to me while I filled the office of Secretary to the Board of Supervision in Edinburgh, when you took a very active part in forming the Combination for erecting the Easter Ross Poorhouse. I am confident that without your energy and perseverance, that Combination would not then have been formed. The views which you at that time so clearly and ably enunciated in regard to the mode of administering the Poor Laws in the Highland Districts, have been of material service to the Board of Supervision, and the example of Easter Ross has now been extensively followed, mainly in consequence of the impulse given by you. It was from a desire to give as wide a circulation as possible to views which to them appeared sound, that the Board referred to your Correspondence in their Annual Report for 1852. The whole system was then new and untried in that part of Scotland, and stood in need of an able advocate."

As this was the first regular introduction of the Poorhouse system of relief into Scotland, as might naturally be expected,

a considerable number of new legal points were raised, several of which were taken into various Courts of Law, and some were carried up to the House of Lords, but no one was ever ultimately decided contrary to what I had laid down in the original Scheme. After superintending the working of the new system for six years, I resigned my office in consequence of ceasing to reside in Ross-shire.[1]

I thus carried out successfully a great practical, legal, and Economical experiment.

Although the administration of the Poor Law is a very important branch of practical Political Economy, I had never in any way studied the subject of Political Economy generally, nor even read any work on it. But in 1854, a circumstance occurred which compelled me to go thoroughly into the whole science.

In 1844 and 1845, Sir Robert Peel passed his two celebrated Bank Acts, the latter for regulating the formation of any new Joint Stock Banks founded after that date.

A Joint Stock Bank had been founded under this Act, and, as is always the case, when the Act came to be worked practically, many new difficulties occurred which had not been provided for. One of these related to the method in which the capital of the Bank might be increased after it was started and in operation.

[1] On accepting my resignation my colleagues passed the following minute :—

"EASTER ROSS UNION POORHOUSE,
3rd January, 1854.

"There was read to the Meeting a letter from Mr. MACLEOD, stating that in consequence of his having given up his residence in Ross-shire, he is obliged to resign the office of Chairman of the Board.

"In accepting Mr. MACLEOD'S resignation, the Board desire to record their appreciation of the great value of the services he has rendered to the parishes forming the Union. They are convinced that the existence of the Poorhouse, its establishment on a basis equitable to the various parishes, the good plan of the House, and almost all the arrangements which have made it an effectual check on the demands of persons whose necessities are produced only by their indolence, while it increases the comforts of the deserving poor, are due to the information procured by Mr. MACLEOD of the working of the poorhouse system in other parts of the country, to the ability with which he digested the information so acquired for the use of the parishes, to the pains taken by him in forming the arrangements for bringing the establishment into operation, and the unwearied labour he has continued to bestow in the supervision of its every day proceedings."

The Board of Trade was distinctly informed beforehand of the nature of the difficulty, and the method in which the Directors proposed to overcome it. The Charter of the Bank was prepared with the sanction and concurrence of the Board of Trade and their legal adviser Mr. Bellenden Ker, and contained provisions for overcoming the difficulty, and if the Board of Trade had not agreed to them beforehand, the Bank never would have been founded at all.

Relying on this promise, the Bank was founded, and proved highly successful, and it soon became necessary to put into force the provisions of the Charter for increasing its capital.

When, however, the Directors of the Bank applied to the Board of Trade to carry out the provisions of the Charter respecting the increase of its Capital, the Board told them that Mr. Ker considered these provisions illegal, and that the Crown had no authority to grant the powers required.

This would have been a fatal blow to the Bank, and the Directors applied to Mr. Wilde, now Lord Penzance, who was in high repute as a commercial lawyer; but from some cause or another the case did not go further.

After struggling in vain for four years with the Board of Trade and Mr. Ker, who still maintained his opinion, the Directors put the case before me, and I gave it as my opinion that the Board of Trade and Mr. Ker were mistaken in Law, that the Crown had full authority to grant the powers required, and that I could draw such a Case as would convince them that they were wrong. The Directors then instructed me to prepare such a Case for them, and the Board of Trade ordered the whole matter to be referred to the then Law Officers of the Crown, the present Lord Westbury and the Lord Chief Justice of England. They decided in my favour, and Mr. Ker, after reading the Case I had drawn, was convinced that he had been mistaken.

The preparation of this Case showed me how utterly erroneous were a great portion of the doctrines current even among

Economists of the highest name, and gave rise to my first publication, *The Theory and Practice of Banking*, in which, for the first time, the great subject of Banking was treated in a systematic form, and an actual exposition of its mechanism given.

The immense part which Banking and Credit play in modern commerce, and the way which they affect every branch of Political Economy, were, I found, very ill appreciated in the professed treatises. None of them even attempted to give an actual exposition of the facts, or had any fixed nomenclature. In 1858, I published my *Elements of Political Economy*, in which, for the first time, an attempt was made to treat Political Economy as a distinct body of phenomena, based upon a single central idea, and to fix a definite sense to its fundamental terms.

This work is intended to be a practical exposition of Economic phenomena. But the present state of the Science of Political Economy is so peculiar, that a great deal more was necessary to hasten its erection into an exact Science, and I therefore undertook the Work on which I have been for some years engaged, and which is now in course of publication, my *Dictionary of Political Economy*.

The first Economists found the public mind and the administration infected with an immense mass of rooted prejudices, errors, and abuses. Their first efforts were therefore naturally directed to sweep these away. The early treatises are filled with long controversies and discussions, which, though of the greatest importance at that time, may now be dismissed in a few lines.

With that great practical work before them, which it required a century to accomplish, it is not very surprising that Economists have not hitherto given any very close attention to settle the exact foundations of the Science. But it may now be said that the *destructive* period has passed, and that the *constructive* era has come. As in all young and growing sciences, further experience and new phenomena have shewn that many of the

early opinions and doctrines require modification and correction. Many isolated doctrines have been established, and on certain special subjects a considerable amount of truth has been ascertained. But this has never hitherto been formed into a coherent system, based upon general conceptions, after the manner of a Physical Science. Leading terms are used without sufficient uniformity, and this leads to inconsistency of doctrine. Above all there is wanted a plain exposition of FACTS, so as to supply intelligent readers with materials to form their own judgment upon the soundness of the doctrines based upon them.

Such is the purpose of my DICTIONARY OF POLITICAL ECONOMY, of which the first Volume has been published.

It is an endeavour to bring Political Economy into the state of an exact science:—

By settling its Fundamental Conceptions. It brings together into a focus all the conflicting opinions of different writers, both ancient and modern, on every separate point, and an attempt is made to arrive at a critical judgment by the acknowledged standards of Inductive Logic.

By giving an actual exposition of the mechanism of the different branches of Commerce.

By giving an historical account, drawn from the best native authorities, of Economic phenomena in various countries.

It gives an analysis of the works of all the principal Italian, French, English, and American Economists.

Much valuable information, the germs of many important theories, several of the chief doctrines, and the opinions of many persons eminent in Political Economy, are only to be found in pamphlets and other fugitive writings. Copious extracts are given from such pamphlets, &c., containing all such facts, opinions, and doctrines as are of permanent value.

It will be preceded by a preliminary Dissertation, containing a narrative of the rise and progress of the Science from the earliest times, being a complete History of Ideas on the subject up to the latest form it has assumed.

Thus the work will form a complete Encyclopædia of Political Economy, by giving an actual exposition of *facts*, by bringing together all conflicting *opinions*, and endeavouring to form an accurate *judgment*, on each separate point.

One species of Credit having been greatly abused, has greatly contributed to cause those frightful commercial crises which seem to recur periodically in every commercial community, as well as many individual catastrophes,—namely Accomodation Paper. It has been the chief cause of so many calamities, that it has often been proposed to adopt Legislative measures to curb it. This, however, for reasons too technical to mention, is impossible; and, besides, a large portion of the most beneficial part of Credit is of the nature of Accommodation Paper. The popular objections to it, therefore, as had been partly pointed out long ago by Mr. Thornton in his *Essay on Paper Credit*, are very wide of the mark. In my *Theory and Practice of Banking* I explained, for the first time, wherein the true danger of Accommodation paper consists. In 1861, the old established house of *Lawrence, Mortimer, and Schrader* failed for an immense amount, and the failure proved to be one of the most flagrant cases on record of the abuse of Accommodation Paper. The Commissioner in Bankruptcy, Mr. Holroyd, in his judgment in this case, quoted my explanation of the danger of Accommodation Paper, at very great length, thereby giving the sanction of his high authority to its correctness.

In April, 1862, M. Michel Chevalier presented a Report on my works to the Institute of France, declaring his adhesion to my doctrines, especially on the subject of Credit. This Report was published in the *Journal des Economistes* for August, 1862.

In 1863, M. Rouher, then Minister of Agriculture and Commerce, in the then French Empire, caused M. Henri Richelot, one of the chiefs of his department, to draw up an account of my doctrines, and he then ordered the work to be officially distributed to all the Chambers of Commerce in the Empire.

In 1867, a Royal Commission was appointed to take into consideration the great subject of forming a National Digest of the Law of England, which had been so earnestly advocated by Lord Bacon. The Commissioners resolved to commence by forming a Digest of certain branches of the Law, as specimens of a Digest of the whole Law. In November, 1867, they issued printed proposals to the Inns of Court, inviting the co-operation of members of the Bar to assist them in preparing Specimen Digests of three branches of the Law, one of them being the Law of Bills of Exchange, Promissory Notes, Bank Notes and Cheques. Those members who were willing to assist them, were requested to send in specimens of the manner in which they proposed to do it. A considerable number of members of the Bar entered into this competition, and in June, 1868, I was declared to be one of the three successful candidates, and was instructed by the Commissioners to prepare the Digest of the Law of Bills of Exchange. I was assiduously occupied on this great work from June, 1868, till March, 1870, when the Commissioners resolved to discontinue the preparation of the Specimen Digests, and recommended that a Digest of the whole Law should be at once commenced.

The Government have not yet taken any step to carry out the recommendation of the Commissioners. I may mention that besides my selection by the Commissioners, I received the following letters from eminent persons holding Judicial rank in England and Scotland, respecting the merits of the Specimen Digest I submitted to the Commissioners:—

THE RIGHT HONORABLE SIR WILLIAM BOVILL,
Lord Chief Justice of the Common Pleas.

25, ECCLESTON SQUARE,
February 10th, 1868.

DEAR SIR,

I am much obliged for your copy Specimen of a Digest of the Law of Bills of Exchange, and I believe there are few men more competent than yourself to undertake that Branch of the Law.

Yours faithfully,

H. D. MACLEOD, Esq. W. BOVILL.

THE RIGHT HONORABLE GEORGE PATTON,
Lord Justice Clerk of Scotland.

30, HERIOT ROW, EDINBURGH,
March 23rd, 1868.

SIR,

I fear that you must have thought me negligent in failing to acknowledge your letter of the 12th February and the accompanying Specimen of a Digest as to Bills of Exchange.

I was desirous of being able, before writing you, to go through it, which, during the hurry of the Session, I was unable to do. I have now done so, and beg, in acknowledging the compliment you have paid me in its transmission, to add my attestation to the excellence of its arrangement and its utility.

I am, very truly yours,
GEORGE PATTON.

THE HONORABLE LORD ARDMILLAN,
One of the Judges of the Court of Session in Scotland.

EDINBURGH,
February 7th, 1868.

DEAR MR. MACLEOD,

I have only time to say that I have looked over and read a good deal of your Digest.

I think it a work of great merit, and likely to be of great use to the Legal Profession and to the Public.

On such perusal of it as I have as yet been able to give, I cannot venture to *criticise*, but I see much ground for commendation.

I am, yours most truly,
JAS. CRAUFURD.

THE HONORABLE LORD MANOR,
One of the Judges of the Court of Session in Scotland.

9, CHARLOTTE SQUARE,
May 29th, 1868.

MY DEAR MACLEOD,

I rejoice to hear that you have been selected by the Commissioners to prepare the Specimen Digest of the Law of Bills of Exchange. It is an honorable mark of distinction which must be highly gratifying to yourself; and I sincerely hope that this recognition of your merits may lead to further advancement, and not only conduce to extend your credit and reputation, but turn out otherwise materially to your benefit. The subject is one of which you are so thoroughly master, that there can be no fear as to the successful execution of the work.

Believe me, yours very truly,
GEORGE DUNDAS.

THE HONORABLE SIR JOHN BARNARD BYLES,

One of the Justices of the Court of Common Pleas.

3, PRINCES GARDENS, KENSINGTON, W.,

DEAR SIR, *May 6th*, 1871.

Your Specimen Digest appeared to me useful and practical, and I again thank you for it.

I observe that, in your economical writings, you have assailed Ricardo's theory of Rent. Fifty years ago I not only read Ricardo's book, but actually abridged it. Subsequent reflection and observation have convinced me that that theory is unsound, as, indeed, is most of his book.

You are, no doubt, acquainted with the writings of Mr. Carey, of Philadelphia, on this subject, who seems to be much nearer the truth. The Manchester people applied to me, about a year ago, to be allowed to reprint a ninth edition of the *Sophisms of Free Trade*, and they issued 5,000 copies, where Ricardo's error is slightly glanced at.

Your obedient Servant,

J. B. BYLES.

On a subsequent occasion I received the following testimonials from some of the Commissioners:—

LORD HATHERLEY,

Lord High Chancellor of Great Britain.

31, GREAT GEORGE STREET, S.W.

Mr. H. D. Macleod was selected by the Commissioners for the Digest of the Law to prepare a Digest of the Law in relation to Bills of Exchange. He performed his task in a manner which shewed that he had an extensive and very intelligent knowledge of the Law.

HATHERLEY.

April 29, 1871.

LORD WESTBURY,

Late Lord High Chancellor of Great Britain.

75, LANCASTER GATE, W.,

SIR, *May 10th*, 1871.

It will give me much pleasure if any expression of the high opinion I entertain of your legal knowledge and general ability, shall at all assist you in obtaining the Professorship for which you are a Candidate, and the duties of which I think you are, in an eminent degree, well fitted to discharge.

The papers you prepared for the Law Digest Commission proved that you had a profound and comprehensive knowledge of a most important part of Mercantile Law.

I have no doubt of your being equally familiar with the other portions of that subject.

Of your works on Political Economy I cannot speak from personal knowledge, but I have heard high commendation of them from various well-informed persons.

You have my best wishes for your success.

I am,

Your faithful Servant,

WESTBURY.

H. D. MACLEOD, Esq.

LORD CAIRNS,

Late Lord High Chancellor of Great Britain.

5, CROMWELL HOUSE, SOUTH KENSINGTON, W.,

MY DEAR SIR, *May 1st*, 1871.

I do not wish to adopt the practice of giving testimonials; but you have all the advantage which could be obtained from a testimonial from me in the fact the Digest of Law Commission, of which I was a member, selected you, after an examination of a number of specimens sent into us by different Members of the Bar, to prepare a Digest of the Law as to Bills of Exchange.

I am, my dear Sir,

Your obedient Servant,

CAIRNS.

H. D. MACLEOD, Esq.

LORD PENZANCE,

Chief Judge of the Probate and Divorce Court.

2, GRAFTON STREET,

SIR, *May 24th*, 1871.

I much regret my delay in answering your note. I can truly say that I was very much struck by the ability and learning evinced in the work you did for the Law Digest Commission; and I hope you may be able to secure the approbation of those upon whose voices the post you desire depends.

Your obedient Servant,

PENZANCE.

H. D. MACLEOD, Esq.

SIR ROUNDELL PALMER, Q.C., M.P.,

Late Attorney General of England.

11, NEW SQUARE,
LINCOLN'S INN,
May 3rd, 1871.

MY DEAR SIR,

You are entirely at liberty to state my belief, founded upon the Specimen Digest of the Law of Bills of Exchange, prepared by you for the English Law Digest Commissioners, that you are well qualified for the Professorship in Edinburgh which you seek to obtain.

I remain,
My dear Sir,
Yours very truly,
ROUNDELL PALMER.

H. D. MACLEOD, Esq.

SIR THOMAS ERSKINE MAY, K.C.B.,

Chief Clerk of the House of Commons; Author of "A Treatise upon the Law, Privileges, Proceedings and Usage of Parliament."

HOUSE OF COMMONS,
3rd May, 1871.

MY DEAR SIR,

I am glad to hear that you are a Candidate for the Professorship of Political and Commercial Economy and Mercantile Law in the University of Edinburgh.

Your writings upon these subjects are so well known and so highly appreciated, that they will be your best testimonials; but I think it also due to you to add that your elaborate preparations for a Digest of the Law of Bills of Exchange and Promissory Notes displayed a scientific acquaintance with the principles of Mercantile Law.

If the University should select you, I am satisfied that they would secure a most learned, accurate, and eloquent Professor, and one who has had experience in communicating the knowledge he has acquired with so much laborious study.

I am,
My dear Sir,
Yours very truly,
T. ERSKINE MAY.

H. D. MACLEOD, Esq.

SIR GEORGE BOWYER, BART., LATE M.P.,

Of the Inner Temple; Barrister-at-Law; Late Reader in Common Law to the Inner Temple.

TEMPLE,

MY DEAR SIR, *May* 6, 1871.

As one of the Law Digest Commissioners I know that your work submitted to that Commission shewed great ability, learning, and industry; and I cannot doubt that you would display the same qualities in the performance of the duties of the Professorship for which you are a candidate

Believe me,

Yours sincerely,

H. D. MACLEOD, Esq. GEORGE BOWYER.

And also the following—

THE HONORABLE LORD ARDMILLAN,

One of the Senators of the College of Justice in Scotland.

It would be presumptuous in me to offer my humble attestation of the high qualifications of Mr. Dunning Macleod for a Chair of Political Economy.

I may, however, be permitted to express my conviction that in the department of Financial and Commercial Jurisprudence, Mr. Macleod has already proved himself to be possessed of unusual perseverance and assiduity, of extensive and accurate knowledge, and of great skill and ability in the application and elucidation of legal principles.

JAS. CRAUFURD.

EDINBURGH, *June 30th*, 1870.

THE HONORABLE SIR JOHN MELLOR.

One of the Justices of the Court of Queen's Bench.

16, SUSSEX SQUARE, HYDE PARK, W.,

DEAR SIR, *May 6th*, 1871.

I thought very favourably of your Specimen Digest of the Law of Bills of Exchange, and I shall be glad to hear of your election to the proposed Professorship of Commercial and Political Economy and Mercantile Law in the University of Edinburgh.

I am, dear Sir, yours truly,

JOHN MELLOR.

H. D. MACLEOD, Esq.

The continual mismanagement of the Paper Currency by the Bank of England had been a source of great trouble and perplexity to Statesmen and the Commercial world. It was in order to diminish the power of the Bank of England over the Paper Currency, and to make its amount in some degree mechanical, that Sir Robert Peel passed his Bank Act of 1844. He adopted a definition of Currency which was then comparatively novel, and a peculiar theory of Currency which it was the professed object of that Act to carry out. He maintained that his Act of 1844 was in accordance with, and the complement of, his Act of 1819. In my work I investigated and explained this theory, and the manner in which the Act of 1844 endeavoured to carry it out. I showed that the theory itself was perfectly well known to all the best authorities of former times, and explicitly condemned by them. I shewed that the principle introduced into the Bank Act of 1844 was noticed and expressly condemned in the celebrated Bullion Report of 1810, by the framers of the Bank Act of 1819, and by Sir Robert Peel himself so late as 1833; and that the inevitable mischief of this theory in a great commercial crisis was distinctly foretold by all these authorities.

Ample experience has verified the wisdom of the doctrines of the Bullion Report. Since the Act of 1844, three great commercial crises have occurred, in 1847, 1857, and 1866, and in each of them it was found absolutely necessary for the Ministry to assume the responsibility of authorizing the Directors of the Bank of England to act in direct contravention of the Law, and to obtain an Act of Indemnity to shield them from the penalties. Every one knows now that a similar course must always be followed on the occurrence of a similar crisis. Is it not clear, therefore, that as the Act invariably aggravates a crisis after it has reached a certain degree of intensity, and is obliged to be broken through, the theory on which it is founded must be false?

In my Work on Banking I, for the first time, demonstrated the following proposition of the most fundamental importance in the theory of the Foreign Exchanges—

That when the rate of discount between any two places differs by more than is sufficient to defray the charges of transmitting bullion, it flows from where discount is lower to where it is higher.

From which it follows that *an improperly low rate of discount is, in its practical effects, a depreciation of the Currency.* And from this it manifestly follows that the true way of controlling the Paper Currency is by paying sedulous attention to *adjust the Rate of Discount to the State of the Foreign Exchanges, and the Bullion in the Bank of England.*

This doctrine at the time it was published in 1856, was but very imperfectly understood, and was extremely unpopular, but its truth was soon signally verified, and acknowledged by the most competent witnesses. After the great crisis of 1857, a Committee of the House of Commons was appointed to investigate its causes, and Mr. G. W. Norman, a Director of the Bank of England and one of the most prominent and distinguished advocates of what is known as the "Currency Principle," and of Sir Robert Peel's Bank Act of 1844, was asked—

Q. 3, 529. Is it not principally by raising the rate of interest that you check the amount of discounts which may be demanded of you?

"Yes; we have found, *contrary to what would have been anticipated*, that the power we possess, and which we exercise of raising the rate of discount, keeps the demand upon us within manageable dimensions. There are other restrictions which are less important. *The rate we charge for our discounts we find in general, is a sufficient check.*"

In 1861, Mr. Goschen published his well-known work, the *Theory of the Foreign Exchanges*, in it he says—

"From the foregoing it seems to be evident that when the exchanges are manifestly against the country, and it is perceived that excessive indebtedness is the cause, there are only two modes of restoring the equilibrium—the one being to increase the exports and diminish the imports—the other to *raise the rate of interest.*

"In both cases that which will effectually bring the gold from abroad, in the most general and practical sense, will be the opportunities offered by a high rate of interest, to effect profit able and attractive investments.

"The efficacy of that corrective of an unfavourable state of the Exchanges, on which we have been dilating, has been most thoroughly tested by late events. Every advance in the Bank rate of discount has been followed by a turn of the Exchanges in favour of England, and, *vice versâ*, as soon as the rate of interest was lowered, the Exchanges became less favorable."

This is now the acknowledged principle upon which the Bank of England is managed; and after my work was published in 1856, the Usury Laws in France were modified, in order to enable the Bank of France to adopt it; and, in fact, it is now universally adopted by every Bank in the world; and it is only a matter of simple justice to myself, so quickly are these things forgotten, to call attention to the fact, that this principle of regulating the paper currency, which is now universally recognised as the true one, was first demonstrated in my work.

I will now give a succinct outline of the subject, which I hope will be intelligible to every one.

Aristotle in ancient times has laid down as a definition that Wealth is anything which is exchangeable, anything which may be bought and sold, and that Value proceeds entirely from Demand. The unknown author of a dialogue called the *Eryxias*, on the Definition of Wealth, which two of the most distinguished Scholars in England, the Master of Trinity College, Cambridge, and the Master of Balliol College, Oxford, agree in thinking belongs to the early Peripatetic period, following up this idea, showed that the principle of Wealth lies exclusively in Exchangeability and Demand, and that if a man can gain a living by giving instruction in science, then that science is as much Wealth to him as gold or silver (*αἱ ἐπιστῆμαι χρήματα*). Now under this designation, all kinds of personal services by which a

man can earn a living are included; which may be summed up under the term LABOUR.

The principles of Roman Law followed exactly the same idea. It is laid down in the Digest that Wealth is anything that may be bought and sold: and it is expressly declared in it that Rights of all sorts are included under the term Wealth, "*Res*" "*Pecunia*" "*Bona*," and under "Πράγματα" and "Χρήματα" in the Basilica. Now a Right to a future payment is CREDIT. Hence, taking MONEY as the representative of material commodities; LABOUR as the representative of personal services of all sorts; and CREDIT as the representative of all Rights to future payments, or incorporeal property; we see it was distinctly declared in ancient times that Wealth, Χρήματα, is of three distinct forms, Money, Labour, and Credit.

Such was the state of the subject as declared in the Pandects and the Basilica, which were the Code of all Continental Europe.

However, the waters of oblivion swept all these things out of recollection, and when the subject of Wealth began again to be thought of in modern times, it was held to consist exclusively in gold and silver, which led to the Mercantile System, which prevailed for some centuries. Gradually, however, the more enlightened portion of mankind began to see the absurdity of restricting the term Wealth, to gold and silver only, and then it was extended to mean the "annual produce of land and labour."

The first school of Economists arose who proclaimed the doctrine of Free Trade as one of the fundamental rights of mankind. They named the whole science of the relations of men to each other, to government, and to property, Political Economy.

One department of this subject they called the *Production*, *Distribution*, and *Consumption* of *Wealth*. But by Wealth they said that they meant the raw produce of the earth which is brought to commerce. They made the principle of Wealth to consist exclusively in Exchangeability, but they restricted it to

material products only. They also clearly set forth that the Production, Distribution and Consumption of Wealth meant Commerce, or Exchange.

Hence the Science of the Production, Distribution and Consumption of Wealth meant the Science of the Exchanges of material products.

Accordingly, in 1776, Condillac declared Economic Science to be the Science of Exchanges.

The Physiocrates maintained the extraordinary doctrine that Labour (excepting only the labour of obtaining the rude produce of the earth) and Commerce do not enrich a nation.

Such an extraordinary paradox as this, contrary to the plainest evidence of facts, could not fail to provoke a reaction. And in 1776, Adam Smith and Condillac published works simultaneously, but independently, to prove that Labour and Commerce are productive of Wealth.

Condillac defined Economic Science to be the Science of Exchanges. Smith speaks of the Production and Distribution of Wealth, but he explains that the purport of that part of his work is to "investigate the principles which regulate the exchangeable value of commodities." Therefore the constructive part of his work is really on Exchanges.

He repeatedly speaks of Wealth as being "the annual produce of land and labour," but afterwards, he says, that unless it is exchangeable it is not wealth. So that, after all, Smith comes to Exchangeability as the principle of Wealth.

We shall now see the mischief caused in a Science, by not properly thinking out its fundamental conceptions.

Smith begins by filling his readers' minds with the notion that Wealth is the "annual produce of land and labour;" but he afterwards expressly includes the "natural and acquired abilities of the inhabitants" as Wealth; which, of course, is the second species of Economic Quantities shewn by the author of the *Eryxias*. Besides this, he also expressly enumerates Paper Credit under the title of Capital; and this is the third species of

Economic Quantities declared to be Wealth in the Pandects of Justinian. Thus we see that the *three* species of Economic Quantities reappear in Smith; and it is manifestly absurd to say that "abilities" and "paper credit" are the "annual produce of land and labour."

Then came J. B. Say, who first defined Political Economy to be the science of the Production, Distribution, and Consumption of Wealth; and he, too, repeatedly declares the principle of Wealth to reside in Exchangeability; and he also enumerates the three species of Economic Quantities.

The manifest error of the doctrine that Labour (other than agricultural) is not productive of Wealth, naturally provoked a reaction; and, as is very often the case in scientific reactions, the pendulum swung from one extreme to the other. From its being held that Labour is not productive of Wealth, the equally absurd and fantastic doctrine was maintained that Labour is the *cause* of all Wealth and all Value. The doctrine that the Value of a thing is simply the "quantity of labour" embodied in it, was carried to the most grotesque extreme by Ricardo, McCulloch, Carey, and De Quincey. Ricardo actually says that the Labour of a million of men in manufactures always produces the same value—no matter whether the product sells for £10 or £10,000—and that the agency of Nature—a fertile soil, genial showers, and a bright sun add nothing to the exchangeable value of the products of the earth!

Common sense revolts against such doctrines. A man has only to look round him in any direction, or to the ground upon which he stands, to see the folly of the doctrine that Labour is the *cause* of all Value. Look at the great oaks of the forest,—is their Value due to Labour? Look at the great cattle that graze in the fields,—is their Value due to Labour? Look at the ground upon which a city stands,—is its Value due to Labour? Look at the hundreds of millions of Paper Credit, by which the commerce of this country is carried on,—is its Value due to Labour?

Then came Mr. J. S. Mill, who commences his work by saying that Wealth is "everything which has purchasing power." Here at last we have come back to the generality of Aristotle and the ancients; and we hoped that we had got rid for ever of the notion that Wealth is the "annual produce of land and labour." But, unfortunately, this bright prospect is soon afterwards clouded over, and he defines the "production of Wealth" to be the "extraction of the instruments of human subsistence and enjoyment from the materials of the globe." And he afterwards says that he means only material wealth.

But such is the strange inconsistency of Mr. Mill that he also, expressly classes the "acquired capacities" of men as wealth; and still further on he classes Bank Notes as productive capital; and he says that bank notes, bills of exchange, and cheques, perform *all* the functions of money, and therefore are Capital in the same way that money is. Here we see that Mr. Mill, notwithstanding his efforts to restrict the term Wealth to *material* products, is perforce driven to admit the existence of the *three* classes of Economic Quantities as Wealth. And again we ask are the "acquired capacities" of men, and "Paper Credit" extracted out of the materials of the globe?

The fatal consequences of the method followed by these literary Economists are soon apparent. From considering some classes only of material products, and not even all classes of material objects, they lay down dogmas—pure Atalanta's apples—which they proclaim as General principles of the science. But Nature and reality break the bonds of the theories of Smith, Ricardo and Mill, just as the planet Mars burst away from the first crude equations of Kepler. But, unfortunately, they do not imitate Kepler, who mercilessly throw aside all his own theories which were seen to be false, and honestly persevered until at last his labours were rewarded with the discovery of the true theory.

When we see so much inconsistency with respect to the very fundamental conceptions of the science, it is only natural to ex-

pect that we should find a similarly unscientific treatment of the science as a whole.

It has been said frequently that Economics is a physical science, and Mr. Mill has in some passages said that we can only expect success in the Social Science by generalizing and extending the principles of reasoning already followed in physical science. Now Ricardo and Mr. Mill break up Economic phenomena into a number of different classes, and they maintain that there is a distinct Law of Value for each class; and Mr. Mill seems to make the whole science consist of "exceptional cases," of "peculiar cases," and of "anomalous cases." Now if each class of Economic Quantities has a different *cause* of Value, how is it possible to have any *Fundamental General Conceptions?* and if each class of cases has a distinct Law of Value, how is it possible to have any General Theory of Value? The method followed, therefore, by Ricardo and Mr. Mill utterly destoys the power of GENERALIZING in Economics, and such a mode of treating a science would drive any Physical Philosopher frantic.

To such a method of treating a science I entirely refuse to agree. I have shewn the complete fallacy of the doctrine that Labour is the cause of, or even necessary to, Value. Along with the whole of the ancient writers, with HUME, with the Physiocrates, with the Italian Economists, VERRI, GENOVESI, BECCARIA, with CONDILLAC, WHATELY, and BASTIAT, I have shewn that DEMAND is the sole GENERAL Cause of the Value of all Quantities, whatever their nature be; and that it is not Labour which is the cause of Value, as Ricardo, McCulloch, Carey, and De Quincey say; but as Hume, Condillac and Whately say, it is *Value*, or *Demand*, which is the *cause of, or inducement to, Labour*. By this simple change we are enabled to obtain General Conceptions in the science, without which there can be no General Propositions.

I have shewn that all Phenomena of Value, and all *changes* of Value, are governed exclusively by changes in the Intensity of

Demand or in the Limitation of Supply, and by the Principle of the *Continuity of the Sciences*, and the *Law of Continuity*, I have swept away and annihilated all the distinctions of the Law of Value in different classes of cases; and thus reduced the Science to one General Theory.

As the ancients held that the principle of Wealth lies exclusively in Exchangeability, and that whatever is Exchangeable is Wealth, whatever its nature is, it follows that if they had treated of a Science of Wealth, it could only have been the Science of Exchanges. This conception, which was allowed by the first Economists to be equivalent to their definition of the subject, was adopted by Condillac, by Whately, and by Bastiat, and it at once clears up all the doubts and difficulties which have obscured the science; and presents us with a distinct body of phenomena relating to a species of Variable Quantities whose laws we are to investigate according to the recognized principles of Physical Science.

This conception manifestly includes all the three species of Exchangeable Quantities, and brings under the general laws of the Science the Commerce in Debts, or the System of Credit. Such was the Conception of the Science adopted in the first edition of this work, in which I shewed that Demand is the sole origin of Value, and formally included Incorporeal Property as a class of Economic Quantities. The whole system of Credit was developed to a much greater extent in my *Dictionary of Political Economy*, and the second edition of my *Theory and Practice of Banking*, merely from my own practical observation of commerce; but in preparing my papers for the Law Digest Commission, I was led to examine the Roman Law on the subject, and I was somewhat surprised to find that the system I set forth is absolutely identical, word for word, with that contained in the Pandects of Justinian.

No one is more sensible than I am of the immortal services rendered to mankind by Smith and his friends by the establishment of Free Trade. That no doubt was the great practical

problem to be worked out in his day, and in countries still brooding in the darkness of Protectionism, his work may still be of use. But Adam Smith is no more fit to be made a text-book of the general science of Economics at the present day, than Copernicus is fit to be made a text-book of Astronomy.

The great practical problem in Economics at the present day is Credit and Banking, and for these subjects a thorough practical knowledge of Commercial Law and the Mechanism of Commerce, as well as an acquaintance with the principles of modern Algebra is absolutely indispensable. For more than a hundred years Algebraists have been in the habit of calling Debts, or Credit, "Negative Quantities," but not one has given any explanation of the nature of this order of Negative Quantities which can be received as satisfactory.

By setting forth the true classification of Property, and exhibiting the actual practice of Commerce, I have shewn the application of this expression; and it will be seen that the doctrines of modern Algebra—the doctrines of Law—and the practice of Commerce—all worked out independently, are in the most perfect harmony with each other, and give a complete solution of the Theory of Credit.

The theory of Credit requires the thorough investigation and settlement of every fundamental Conception in Economics; and I have applied the principles of the Inductive Logic of Bacon to give the same generality to the definitions of Economics as is done in all Physical Sciences.

Thus by Generalizing all the fundamental Conceptions, and the Law of Value, it is seen how Economics is a Positive Inductive Science.

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THE

PRINCIPLES

OF

ECONOMICAL PHILOSOPHY.

PRELIMINARY REMARKS.

If there be one race of men more than another to whom the undying gratitude of mankind is pre-eminently due, it is to that illustrious band of thinkers in France, Italy, Great Britain, and Spain, who during the last century founded the science now called Political Economy, or Economics, and brought about that great revolution in opinion which after a long and arduous struggle finally established the doctrines of Free Trade in this country. Lord Macaulay remarks that the two greatest and most salutary social revolutions which have taken place in England, were those which in the thirteenth century put an end to the tyranny of nation over nation, and which a few generations later put an end to the property of man in man; but to these there may be added a third—not less great and not less salutary than the other two—that great revolution in the ideas of the age which abolished for ever the property of one set of men in the *industry* of others.

But, however deep the debt of gratitude which is due to these immortal thinkers, and however warmly we may acknowledge it, it is given to no men, however illustrious, to arrest the progress of thought, and to impose limits upon science. It is the sacred duty of those in succeeding generations who would aspire to walk in their steps, to sift and examine their doctrines by the light of further experience, even as they examined the doctrines of their predecessors, and to carry on the science from where they left it.

It has thus happened that, nearly every science has undergone a complete transformation from the mode in which it was conceived by its founders, and there is, besides, in every science a certain stage at which it becomes necessary to introduce more powerful and refined methods of investigation, more comprehensive forms of expression, and more minute and exact observations.

Highly as we may esteem the great Economists of this and other countries, it is essential to remember the character of the great Economical contests up to recent times. They have been almost entirely *destructive*. The first Economists found the public mind and the administration infected with an immense mass of rooted prejudices, errors, and abuses. Their first efforts were therefore naturally directed to sweep these away; to beat down and abolish false doctrines of various kinds; to extirpate bad and mischievous laws interfering with the natural order of things; to abolish legislative interference with wages, with prices, with the interest of money, and with the commercial intercourse of nations; to establish, in fact, freedom of contract. And in this Economists of all schools are thoroughly agreed.

The repeal of the Corn Laws in England may be regarded as the close of the destructive era of Economical science in this country. We have now arrived at a new and distinct phase of the science; that, in fact, in which the period of destruction has ended, and that of construction has come.

With the great practical work before them, which it required three quarters of a century to accomplish in this country, it is not very surprising that Economists have not hitherto given any very close attention to settle the exact foundations of the science. The early treatises are filled with long controversies and discussions which, though indispensably necessary at that time, may now be dismissed in a few lines.

But while Economists of all schools are agreed on what was the destructive portion of their science, when we come to the constructive or positive science, this agreement is at an end. Nothing can be more lamentable or astonishing than the differences of doctrine and the antagonism of Economists on almost every point in the science, so as to create a widely spread impression that there is no such intelligible science at all as Economics.

It is well-known that each of the physical sciences which

have attained such great magnitude and extent in modern times, and which have produced such admirable results, have been brought to their present state of perfection by extraordinary labour having been bestowed in ascertaining and settling their first elements, namely, their definitions and axioms, or accurate conceptions and expressions of the objects they treat about, and the general laws which regulate their relations to each other.

But it has not always been so. These wonderful sciences were once in a very different state. The modern plan of teaching a science only in its existing state, no doubt, imparts a vast amount of actual knowledge. But as a mental discipline, or as a matter of education, the History of Science is of enormous value, and, we venture to say, is far too much neglected.

Many persons can "cram" up a considerable amount of actual knowledge, and yet derive but little benefit from it. But to study the History of Ideas on the subject, to understand clearly the principles of the different controversies that have been waged, to comprehend why one set of ideas prevailed over another, is an educational exercise of immense utility, which is almost entirely neglected. Few persons are aware of the wrecks of the fierce controversies which lie buried beneath the calm and placid surface of modern science like those of mighty armaments below the summer sea.

Many persons are apt to think that controversies in Economics are mere logomachy, vain and unprofitable disputes about words, and of no real consequence. They are apt to think that the Physical Sciences treat about things, and Economics only about words. But those who think so, display a total want of knowledge of the History of Science. The early history of all science is full of controversies about the meaning of words. Many may think that Physical Science being about things there is no difficulty in giving a name to what is seen so readily. This is a lamentable error. On the contrary, it almost invariably happens that names get into a science, and acquire a position in it, before any one can tell what they mean. Thus, the words *Momentum*, *Vis Viva*, *Uniform Force*, *Accelerating Force*, and several others, acquired a position in Mechanics before any one could tell what they really meant, and all the philosophical world of the day was engaged in the wordy war to settle their

meaning, and obtain true definitions; consequently it is an entire error to suppose that controversies in Physical Science are not about words. On the contrary, it was in the true definitions of words that the whole foundations of the sciences were laid, and it was just because all the great mathematicians of the day so thoroughly understood the supreme importance of ascertaining the true meaning of words, and fought out the meaning of each separate one with such perseverance, that they at length arrived at such an unanimity of agreement, and these controversies have now been almost forgotten. There was a time, then, when what are called the exact sciences had not attained that rank. They were once matters of *opinion*, and not of demonstration, and they only attained the rank of demonstrative truth, because each separate word and each separate principle was thoroughly discussed and settled.

And why has Economics not yet attained the same rank as Mechanics as an exact science? Because the same care has never yet been given to settle its definitions and axioms. Economics is now, like Mechanics in its early stages, overrun and infested with words whose meaning has never yet been settled on certain principles, and which are never almost used by any two writers in the same sense, nay, even few of the best writers are consistent with themselves. The men who have cultivated Economics are probably of as great natural ability as those who cultivated physical science, of course with the exception of a few unapproachable examples. Why then have they not come to the same unanimity of opinion as their brethren? The simple reason is that they have not adopted the only means that could by any possibility ensure success, namely, a thorough discussion and settlement of the meaning of words. Nay, they have systematically despised it. Now, what the words *Momentum*, *Vis Viva*, &c., were to Mechanics in its early stages, that *Value*, *Currency*, *Capital*, &c., are at the present day to Economics.

And it is for this very reason that many suppose that Economics cannot be made an exact science, because the only means that can make it so have been systematically neglected. Many, however, suppose that there is no use for such a thing; matters will go on just the same, they think, for all the disputes. But the same may be said of physical science. A man may be

an excellent seaman, and yet be entirely ignorant of the principles which govern the progress of his ship. But is there no use in the science of Mechanics? So, doubtless, a man may be an excellent banker and a very successful practical merchant without any knowledge of Economics, and yet is there no use in the science of Economics?

Now Economics depends upon certain fundamental conceptions or definitions and axioms just as mechanics does, and by settling these with as great care as is done in physical science, it may be raised to the rank of an exact science. And yet there are writers, of no mean acquirements, too, who entirely discourage such a course of proceeding, who consider such attempts as pedantic, and mere waste of time; who would admit that in every other branch of human knowledge clear and precise technical terms are absolutely indispensable, and yet in Economics alone think there is no need of anything of the sort.

Besides the nature and extent of the Science itself, and the method of investigation proper to it, its fundamental conceptions are *Wealth*, *Value*, *Production*, *Consumption*, *Capital*, *Credit*, *Currency*, *Rate of Profit*, and some others. It might naturally have been expected that, as these terms are the means by which discussions are carried on, Economists would have been agreed upon all of them.

On the contrary, there is no agreement among Economists upon any one of them. They are entirely at variance with each other, not only as to the nature and extent of the science, but even as to the method of investigation proper to it. No Economist has attempted to fix the fundamental conceptions of the Science on scientific principles. Excellent as are many of their refutations of previous errors, they have never yet made an attempt to give an exposition of the facts of the science as a foundation for a theory. Now, as the phenomena of Economics are all produced by the actions of men, if the same care were taken to ascertain these facts, and to express their relations in the same accurate and generalised language as is done with regard to those of physical science, Economics might be made a science as certain as any physical science.

The first thing, then, that is wanted is to introduce into the Science the spirit of true generalisation—the generalisation of its fundamental conceptions, and the generalisation of its principles by the acknowledged canons of Inductive Logic.

When Galileo began to study Natural Philosophy he put aside Mathematics, never dreaming that there could be any connection between the two; a sentiment, too, which appears in Bacon. Galileo very soon perceived his error. Many persons at the present day think that there is no connection between Economics and Natural Philosophy. They are just in as great an error as Galileo and Bacon were. Economics is a science of causes and effects numerically measured, produced by the properties of men, and its types and standards of reasoning are to be found in the sciences which treat of the causes and effects produced by the properties of material substances. In both equally the Inductive Logic reigns supreme. The same general method of investigation is common to all of them. And there is the same hope and encouragement to expect success that the Athenian orator gave to his countrymen because their failure arose—not from the nature of the thing, but from their own errors. So it is with Economics. The lamentable state in which it is at present does not arise from the nature of the thing itself, but from its method of treatment.

By paying the same attention as Physicists have done to obtain true conceptions and axioms from reality itself, by proper methods, and not by arbitrary dogmatism; by proceeding step by step, definition by definition, axiom by axiom, principle by principle, in due and proper order; by maintaining a proper unity of conception and principle from the beginning to the end, it will be found that a vast and magnificent edifice of DEMONSTRATIVE truth may be reared up; Economics will emerge from the turbid regions of controversy as clear and precise, as sharply defined, and as capable of being erected into an exact science as any other whatever; it will attain a grandeur, a precision, and a compass never yet thought of. A new Inductive Science, the connecting link between Physical and Moral Science, will be created, and a new monument raised to the everlasting glory of the Monarch of Philosophy.

CHAPTER I.

ON THE METHOD OF INVESTIGATION PROPER TO ECONOMICS.

SOCRATES—BACON—J. B. SAY—AUGUSTE COMTE—J. S. MILL.

Bacon proclaims the Doctrine of the Continuity of Science.

1. When the greatest Moral Philosopher of antiquity attempted to master the Physical Science of his day, he found that it was a mere chaos of confusion, a mass of baseless dogmatising and vain speculation. He called off his disciples in blank despair from such unprofitable labour, and bade them devote themselves to the study of Moral Science, which was within their comprehension, and to learn just so much of Natural Science as to know when to sow, and to reap, and to sail. Nay, he considered those who engaged in such objects of contemplation as wanting in good sense. He used to inquire whether such persons thought they already knew enough of human affairs before they proceeded to such subjects of meditation. He thought that men could never come to a satisfactory conclusion on such points, because those who most prided themselves on their knowledge were altogether at variance with each other. He asked whether those even who studied celestial phenomena, and discovered the laws which governed all things, fancied they would be able to produce, at their pleasure, wind, rain, changes of the seasons, as men who have learnt mechanical arts can produce what they want. As for himself, he would abandon all such vain speculations, which could never have any practical utility, and turn his attention entirely to moral and civil philosophy, and all things which concerned mankind. Thus Physical and Moral Science were utterly divorced in ancient times, and for twenty centuries it was supposed that there was no connection between them.

2. But our Bacon, greatly wiser—and for this he has never received the thousandth part of the credit that is due to him—had the marvellous sagacity to perceive that in Natural Science are to be found the types and standards of reasoning which are to guide us in Moral and Political Science. He inculcates the study of Physical Science, it is true, for its own sake, but not for its own sake only, but as the foundation of Moral Science. It is his transcendant merit to have perceived and proclaimed with the voice of a trumpet the grand doctrine of the continuity of the Sciences. And we must be the more earnest in defending the just title of Bacon to this glorious discovery, because the admirers of Auguste Comte have claimed for him the orginality of the idea. But we shall shew abundantly that Bacon was the true discoverer of the doctrine. With Physical Science not in a very much better state than it was in the days of Socrates, Bacon not only did not discountenance it, but he had the miraculous sagacity to perceive that the way to true and certain reasoning in Moral Science lay through Physical Science. He complains bitterly of the mutual damage to the Sciences by their separation, and the neglect of Natural Philosophy as the great nursing mother of them all. "And it is a matter of common discourse of the chain of sciences, how they are linked together, insomuch as the Greeks, who had terms at will, have fitted it of a name of circle learning. Nevertheless, I that hold it for a great impediment to the advancement and further invention of knowledge that particular arts and sciences have been disincorporated from general knowledge, do not understand one and the same thing, which Cicero's discourse and the note and conceit of the Grecians in their word circle learning do intend. For I mean not that use which one science hath of another for ornament or help in practice, as the orator hath of knowledge of affections for moving, or as military science may have use of geometry for fortifications; but I mean it directly, of that use by way of supply of light and information, which the particulars and instances of one science do yield and present for the framing or correcting of the axioms of another science in their very truth and notions. And therefore that example of oculists and title lawyers doth come nearer to my conceit than the other two: for sciences distinguished have a dependence or universal knowledge to be augmented and rectified by the

superior light thereof, as well as the parts and members of a science have upon the maxims of the same science, and the mutual light and consent which one part receiveth from another. * * * * And these are no allusions, but direct communities, the same delights of the mind being to be found not only in music, rhetoric, but in Moral Philosophy, policy, and other knowledges, and that obscure in the one which is more apparent in the other; yea, and that discovered in the one which is not found at all in the other; and so one science greatly aiding to the invention and augmentation of the other. And therefore without this intercourse the axioms of the sciences will fall out to be neither full nor true."[1]

3. Again, after shewing that one cause of the backward state of the sciences was the short period during which they had been studied, he says—"In the second place there presents itself that cause of great weight in every way, namely, that during those very ages in which the genius and learning of men have chiefly flourished, Natural Philosophy obtained the least part of human labour. And nevertheless this very thing ought to be held to be the great Mother of Sciences. For all arts and sciences if torn from this root, though perhaps they may be polished, and made fit for use, yet they will make no further progress. * * * And the age during which Natural Philosophy was seen to flourish in Greece, was but a very brief interval of time, for both in the more ancient times, the seven who were called the wise men, all except Thales, applied themselves to Moral Philosophy and civil affairs, and in later times when Socrates drew down philosophy from heaven to earth, Moral Philosophy prevailed more and more, and turned the minds of men from the Philosophy of Nature."[2] So again—"To this it is to be added that Natural Philosophy, even among those very men, who have nurtured it, has scarcely ever obtained the whole leisure and employment of any one, especially in these later times; except perhaps some instances of a monk in his cell, or a gentleman speculating in his country house. But the Philosophy of Nature has been made as it were a passage and a bridge to something else. And so this great Mother of the Sciences has been with wonderful indignity thrust down to the office of a handmaid. * * * Meanwhile let no one expect much progress in

[1] *Valerius Terminus*, c. 8. [2] *Nov. Org.*, *B. I.*, *Aph.* 79.

the sciences (especially in the practical part of them) unless Natural Philosophy be applied to each individual science, and each particular science be referred again to Natural Philosophy. Hence it is that astronomy, optics, music, most of the mechanical arts, medicine itself, and—what one might more wonder at—MORAL AND POLITICAL PHILOSOPHY, logical sciences have scarcely any depth, but only glide over the surface of a multitude of things, because, after these separate sciences have been once distributed and erected, they are no longer nourished by Natural Philosophy. Therefore it is not the least strange if sciences make no progress when they are torn from their roots."[1]

4. So also—"And here it may be repeated what was said above, about the application of Natural Philosophy, and that each separate science must be referred to that again that the sciences may not be severed and cut off from the trunk. For without this little progress is to be hoped for."[2] And again—"Some, too, may doubt rather than object, whether we speak of Natural Philosophy only, or that the other sciences, logic, ethics, politics, are also to be brought to perfection by the same method. But most assuredly we mean what we said to apply to them all; and as the common logic which acts by syllogism affects not only the natural, but all sciences, so also ours which proceeds by induction, embraces them all. For we form a history, and tables of discovery of anger, fear, shame, and the like, also of examples in Politics, so also of affections of the mind, &c."[3]

So again—"Let us now come to that knowledge to which the oracle of old leads us—namely, the knowledge of ourselves, upon which, as it touches us the more nearly, the more diligence is to be bestowed. This knowledge is for men, the aim and the object of all knowledges, but it is only a portion of Nature. And let this be laid down as a general rule, that all divisions of sciences be so understood and applied that they may rather mark and distinguish them, than separate and divide them, so that we may always avoid a break of continuity in the sciences. For the contrary mode has made each separate science barren, empty, and erroneous, since they were not nourished, supported, and corrected by the common fountain and aliment."[4]—"We

[1] *Nov. Org., B. I., Aph.* 80.
[2] *Nov. Org., B. I., Aph.* 107.
[3] *Nov. Org., B. I., Aph.* 127.
[4] *De Augmentis, Lib. I., c.* 1.

have laid down that this is the function of Natural Philosophy to be the common mother of the sciences." [1]

5. It was, then, the matchless and undivided merit of Bacon to discover that the same great fundamental principles of reasoning govern all departments of human knowledge, and that general principles of Logic govern particular sciences with a higher authority than belong to these particular sciences. It has long being observed that the genius of the Platonic Philosophy is essentially Inductive. Only Plato applied the Inductive method to the ideas of the moral world; Bacon in the first instance to those of the Physical world. But the genius of the Philosophy of each is identical. The sublime discovery of Bacon was that Physical Inductive Science must PRECEDE Moral Inductive Science: that Natural Science is the nursing mother of all science, and that in it are to be found the types and standards of reasoning to which all other reasoning is to be referred; that it is the παιδαγωγός to lead us to the study of Moral Science. He proclaimed the union between IDEAS and REALITY, to which nothing earthly was comparable, which was the sole hope of attaining true science, and in consequence of the divorce between them, the whole fabric of human knowledge as then existing was like some magnificent structure without any foundations.

6. It has indeed been the fashion of some writers, lately, systematically to depreciate the merits of Bacon, and some almost seem to go the length of denying him any merit at all because it cannot be shown that the *Novum Organum* had any direct influence on the progress of physical discovery. He made no discovery himself, and the progress of physical science would have been just as great if he had never written. Even if these assertions were true, it would not in the least diminish the lustre of that work. No one can fairly appreciate the merit of that work who is not well acquainted with the absurdity of the grounds upon which the established opinions of his day rested. Bacon saw through this, and discovered the weakness of the grounds of the current belief with a clearness and penetration truly surprising. One reason, perhaps, why he may not have received his due share of credit is, that he overrated the power of his Logic; and supposed that by

[1] *De Augm., L. III., c. 4.*

its means discoveries could be made, so that almost all minds could be brought nearly to the same level, and make discoveries as equally as they could draw circles by compasses. That he entirely failed in this is true, and it is probable that his failure in that instance has had some effect in making his real merits less thought of than they deserve. But he failed in this instance by not observing his own rules. For he has laid down that the conceptions of a science are to be framed with exactly the same care as the axioms, or general principles. And he fell into exactly the same error himself as he charged upon the Aristotelians, namely, considering Logic as an instrument of discovery. Whereas the fundamental conception of Logic is not the science of *discovering* truth, but the science of *judging* whether or not certain alleged discoveries are true. Logic is the science of *Judgment*, and not an art of discovery, nor even an art of reasoning. The faculty of proposing notions, or ideas, or laws, or reasons, belongs to the *Imagination* or the *Invention;* but all these ideas, conceptions, or laws, must be submitted to the tribunal of the *Reason*, or *Logic*, before they can be finally admitted to be true. And it is the province of Logic to discover and apply the tests which any conception, or axiom, must satisfy before it can be admitted to be true. Cicero has described once, and for ever, the true function of Logic.—"*In hâc arte, si modo est hæc ars, nullum est preceptum quo modo verum inveniatur, sed tantum est quo modo* JUDICETUR."[1] When, therefore, we separate what falls within the limits of this conception from what transgresses it; when we consider that in his day there was not a single science from which he could draw his observations, there is no candid mind but must be astonished at his penetration and sagacity in anticipating and constructing the Science of Sciences. For the *Novum Organum* is not the science or the art of discovery, but it is the *Theory of Theorizing*, or the *Theory of Generalization:* it is the science and the art of judging and deciding whether the conceptions and the axioms of the various sciences are true. No one can dispute the merit of Aristotle in discovering the syllogistic mode of reasoning, nor can blame him because his injudicious followers pushed it far beyond what he ever intended. But Aristotle founded his system *inductively:*

[1] *De Oratore, II.*, 38.

he framed it by observing what examples of reasoning were acknowledged to be valid by common consent. Bacon founded his system *à priori*, with no single instance of an Inductive Science in existence. He made no claim to have created a science, but only to have proclaimed the only true *method* by which a science could be created. And though no doubt additions have been made to Inductive Logic in modern times, yet the amount of success he achieved is truly marvellous. By a curious whim of fortune, the chief of the school of *à priori* reasoners founded his system inductively: the chief of the school of Inductive Logic founded his system *à priori*.

7. And this great discovery, first seen and pròclaimed by Bacon, has been repeatedly enforced by the most eminent men since. Thus, Newton says that an extension of our knowledge of the laws of Natural Philosophy would certainly extend our knowledge of the laws of Moral Philosophy. So Bishop Butler says—"There is much more exact correspondence between the natural and the moral world than we are apt to take notice of." And the most celebrated metaphysical writers of the last century held the same doctrine.

8. The earliest school of Economists in modern times acknowledged the same principles. Seeing, as is explained in a subsequent section, the intolerable misery under which their country groaned, a few righteous and generous philosophers struck out the idea that there must be some natural science, some principles of eternal truth, with regard to the social relations of mankind, the violation of which was the cause of that hideous misery which afflicted their native land. Although they did not in all respects succeed, and were somewhat hasty in laying down general principles, so that in fact they gave their philosophy too much the air of *à priori* dogmatism, they nevertheless acknowledged the doctrine that there is a Natural Moral Science, whence they were called Physiocrates. But this doctrine was proclaimed with much more earnestness and effect by J. B. Say, the French Economist, who however had read Bacon with such extraordinary carelessness as to say—"The Chancellor Bacon, who was the first to teach that to understand the processes of Nature we must consult, not the writings of Aristotle, but Nature herself, by judicious observations and well-contrived experiments, was entirely ignorant that the same method was

applicable to moral and political sciences, and that it would obtain the same success in them ! !"[1] Passing over, however, this extraordinary statement, he says:—"In Political Economy, as in Physics, and in every thing else, men have made systems before establishing truths; that is, they have published as truth unfounded conceptions and pure assertions. Afterwards they applied to this science the methods which have contributed so much, since the time of Bacon, to the progress of all the others, that is the method of experiment, which essentially consists in not admitting as true anything of which observation and experience have not proved the reality, and as general truths only such conclusions as naturally flow from them. This entirely excludes those prejudices and those authorities which in science, as in morals, in literature, and in government, intrude themselves between man and the truth."[2] Again—"The manner how things are and how they happen constitute what is called the *nature of things*, and exact observation of the nature of things is the only foundation of all truth. Thence spring, too, different kinds of sciences: sciences which may be called *descriptive*, which consist in naming and classifying objects, like Botany and Natural History. Then the *Experimental* Sciences, which teach us the reciprocal actions which things exercise upon each other, or, in other words, the connection between effects and their causes, such as Physics and Chemistry. These last require that we should study the very nature of things, because it is by virtue of their nature that they act and produce their effects: it is because it is the nature of the sun to be luminous, and of the moon to be opaque, that when the moon passes before the sun the latter is eclipsed. A careful analysis sometimes is enough to inform us of the nature of a thing: sometimes it is only clearly made known to us by its effects; and when we cannot devise experiments on purpose, observation is in every case necessary to confirm what analysis can teach us.

"These principles which have guided me will assist me to distinguish two sciences which have been almost always confounded—Political Economy, *which is an experimental science*, and Statistics, which is only a descriptive science.

[1] *Cours d'économie politique*, *Vol. II., p.* 550.
[2] *Traité d'économie politique. Discours Préliminaire, p.* 3.

"Political Economy, as it is studied at present, is entirely founded on facts: because the nature of things is a fact, as well as the result which flows from it. * * * Political Economy is established on impregnable foundations as soon as its fundamental principles are rigorous deductions from general undoubted facts."[1]

9. We have now, we think, offered ample evidence to shew that the great doctrine discovered and proclaimed by Bacon, that Physical Science is the true basis of all science, was admitted and acknowledged to be true by a long line of illustrious men, and among others by the cultivators of the new science which was rising into existence—Political Economy. How far they succeeded in realizing this conception is quite another matter. The great point was that the principle was admitted, and carried within itself the method of judging and correcting any special errors that might be made in any particular science. We have now to notice another writer who has had many ardent admirers in recent times.

Auguste Comte proclaims the Doctrine of the Continuity of the Sciences, but fails to make Economics an Inductive Science.

10. AUGUSTE COMTE was born at Montpellier in 1795, of a high Catholic and Royalist family, and was placed at one of Napoleon's Lyceums, where great efforts were made to restore the old theologico-metaphysical system. Scarcely 14 years of age, he revolted against the system, and resolved to commence a universal regeneration, both political and physical. In 1814 he entered the *Ecole Polytechnique*, and the mathematical studies of the place strongly confirmed this tendency. He became convinced that the same spirit of philosophizing must be applied to vital and social questions, as had already been applied to inorganic substances, and that the education which stopped at the latter was imperfect. The whole system of this Philosophy he called the Encyclopædic Hierarchy.

11. Comte denominates his doctrine the "Positive Philosophy," because he says that every science has passed through three stages of opinion—*First*, The Theological—when men in

[1] *Traité d'économie politique. Discours Prèliminaire p.* 5.

their ignorance and incapacity to account for phenomena, referred them on all occasions to the interposition of the Deity—*Secondly*, The Metaphysical—when they had abandoned the theological stage, they tried to speculate on the causes of phenomena, and attributed them to certain mysterious agencies. Comte maintains that this is beyond the reach of human faculties, and that all they can do is to discover the *Laws of the Phenomena*. As an instance of the metaphysical state of science he takes the two prevalent theories of light—the emission and the wave theory. Both these he condemns as unphilosophical, and considers the researches into the laws of heat as the true model of scientific investigation. This system of inquiring only into the Laws of Phenomena, he denominates the "Positive" system, to which all Philosophy will, he asserts, finally confine itself.

12. Now there is much truth in what he says regarding the theological phase of opinion. But Bacon had said the very same thing long before. He tells us that Providence acts only through secondary laws, and that these are the only ones which the philosopher has to investigate. So that there is no novelty in this part of Comte's doctrine. In the next place men of science, long before Comte, were perfectly agreed that the true method of procedure in every science is to begin by ascertaining the Laws of the Phenomena. Newton laid this down in his Optics, and the rule was perfectly well understood and acted upon by all physicists long before Comte. But with respect to Comte's next doctrine, that philosophers must stop there, and never seek to investigate the causes of these laws,—that is a limitation of the powers of the human mind no physicist will ever submit to. In fact, as soon as laws are proved to be true they become *phenomena*. A true theory is a fact which is proved by circumstantial evidence. A theory is nothing but a reason, or a principle, or a law, which explains some phenomenon; and of course, if the true reason be ascertained, it is a fact. By collecting a vast body of these laws together, the human mind naturally and irresistibly endeavours to discover, by the same method of philosophy, if these phenomena are not subject to general laws, like the first order of phenomena. They will certainly try to discover whether there are laws of laws. When we once seek for laws at all, it is not more metaphysical to seek for the law of a law, than for the law of a phenomenon. In

fact, Comte's system would go to forbid us to inquire into the reason of anything—all reason being metaphysical—a restraint the human mind will never submit to.

13. Comte's great doctrine is, that there is a certain progressive order in science, and that the Social Science must be investigated by methods strictly analogous to those pursued in Physical Science, and that the study of the latter must precede the former. But this is nothing more, as we have shewn above, than a reproduction of the Baconian doctrine of the Continuity of the Sciences. Comte says that there is a certain due and proper order, in which only the sciences can be properly understood. First, as the basis of all human knowledge, Mathematics; then the inorganic sciences, Astronomy, Physics, and Chemistry. Next, the organic science, Physiology, the study of the individual; and, lastly, Social Science, or individuals in society, which he calls Social Physics. Comte strongly urges the necessity of studying the anterior sciences in due and proper order, and that each one should be understood before proceeding to the next; and especially those who study Social Physics should be well acquainted with Astronomy, Physics, Chemistry, and Physiology before they attempt it.

14. It will be seen that the ideas of Comte are in reality identical with those of Bacon, and that his "Positive" Philosophy—except the untenable restriction he attempts to impose upon inquiring into causes—is simply the Baconian Philosophy which had been repeatedly assented to by a long line of illustrious men. And yet some of his admirers seem to think that this is a great discovery of Comte's:—"Let me now call attention to Comte's initial conceptions; and first to the luminous conception of all the sciences — physical and social — as branches of one science, to be investigated on one and the same method.

"To say that science is one, and that the method should be one, may to the hasty reader seem more like a truism than a discovery; but, on inquiring, he will find that before Comte—although a general idea of the connection of the physical sciences was prevalent, yet to judge from Mrs. Somerville's work, or Herschell's *Discourse*, it was neither very precise nor very profound—no one had thought of a Social Science, issuing from the physical sciences, and investigated on the same method.

In fact, to talk of moral questions being reduced to a positive science would even now be generally regarded as absurd!!"[1]

It has already been seen how untenable is the claim set up on behalf of Comte as the originator of the idea that physical science is the basis of Social Science. Many illustrious men had said the same since Bacon's day, but unfortunately they had done little more than preach it.

15. Comte, however, was in a better position to realize this great conception than many others who had preached it. A highly accomplished mathematician, with the knowledge of the history of the Physical Sciences which had already been created, he devoted himself especially to Sociology, or Social Physics. He had before him the works of Economists of several countries, Italy, France, and England. What a splendid opportunity, therefore, of realizing his conception, and giving an example to the world of the creation of at least one Social Science on the model of a Physical Science! What a noble opportunity of examining the current doctrines in Economics by the acknowledged standards of reasoning in Physical Science! approving, confirming and developing what was good, and rejecting what was false, and pointing out the application of his doctrines. Accordingly, when we have passed through and admired his exposition of the principles of the Physical Sciences, we naturally expect a Physical Economics constructed in a similar manner, as the coping stone or the crown of the preceding work. What, then, is our astonishment to find that when he comes to Political Economy, he speaks of it with the greatest contempt, and does not admit it to be a science at all! Except Smith, whom he lauds for not making it a science, he treats the Economists with the most unbounded disdain! Now, the worse the condition of Economics was in the hands of its professed cultivators, the more glorious would have been the triumph of the "Positive" Philosophy, in shewing how it might be made a "Positive" Science. But, just when he had the grandest opportunity, he abandons the attempt. In the whole history of Science, there never was a more ludicrous collapse! So vanish the pretensions of Comte to create a Positive Physical Social Science. The huge mountain was in labour, and there was produced not even a ridiculous mouse.

[1] *Mr. G. H. Lewes's Account of Comte's Philosophy, in Bohn's series, p.* 10.

Self-contradiction of Mr. J. S. Mill as to the Method of Investigation proper to Economics.

I.—*Mr. Mill says that the Inductive is the only proper Method to investigate Economics.*

16. The doctrine, then, that the same spirit of philosophizing is common to physical and moral science, had now become one of the recognised dogmas of Philosophy. We need not quote others, but we may observe that Mr. Mill follows exactly the same strain as the preceding writers. He says—"The backward state of the Moral Sciences can only be remedied by applying to them the methods of Physical Science duly extended and generalized."[1] And again—"In scientific investigation, as in all other works of human skill, the way of attaining the end is seen, at it were instinctively by superior minds, in some comparatively simple case, and is then by judicious generalization, adapted to the variety of complex cases. We learn to do a thing in difficult circumstances by attending to the manner in which we have spontaneously done the same thing in easy ones.

"This truth is exemplified by the history of the various branches of knowledge which have successively, in the ascending order of their complication, assumed the character of sciences, and will doubtless receive fresh confirmation from those of which the scientific constitution is yet to come, and which are still abandoned to the uncertainties of vague and popular discussion. Although several other sciences have emerged from this state, at a comparatively recent date, none now remain in it, except those which relate to man himself, the most complex and most difficult subject of study, on which the human mind can be engaged.

"Concerning the physical nature of man as an organized being—though there is still much uncertainty and much controversy, which can only terminate by the general acknowledgment and employment of stricter rules of *Induction* than are commonly recognized, there is, however, a considerable body of truths, which all who have attended to the subject, consider to be fully established: nor is there now any radical imperfection in the method observed in this department of science, by its most distinguished modern teachers. But the laws of Mind, and even in a greater degree those of Society, are so far from being

[1] *Logic. B. VI. Table of Contents.*

attained, a similar state of even partial recognition, that it is still a controversy whether they are capable of becoming subjects of science in the strict sense of the term; and among those who are agreed upon this point, there reigns the most irreconcileable diversity on almost every other. Here, therefore, if any where, the principles laid down in the preceding Books may be expected to be useful.

"If on matters so much the most important with which the human intellect can occupy itself, a more general agreement is ever to exist among thinkers; if what has been pronounced the 'proper study of mankind,' is not destined to remain the only subject which philosophy cannot succeed in rescuing from empiricism—the same processes, through which the laws of many simple phenomena have by general acknowledgment been placed beyond dispute, must be consciously and deliberately applied to these more difficult inquiries. If there are some subjects on which the results obtained have finally received the unanimous assent of all who have attended to the proof, and others on which mankind have not yet been equally successful; on which the most sagacious minds have occupied themselves from the earliest date, and have never succeeded in establishing any considerable body of truths, so as to be beyond denial or doubt; it is by generalizing the methods successfully followed in the former inquiries and adapting them to the latter, that we may hope to remove this blot in the face of Science."[1]

17. In another place Mr. Mill has given a more particular exemplification of the analogy between Natural and Moral Science—"Although the scientific arrangements of organic matter afford as yet the only complete example of the true principles of rational classification, whether as to the formation of groups or of series, these principles are applicable to all cases in which mankind are called upon to bring the various parts of any extensive subject into mental co-ordination. They are as much to the point when objects are to be classed for purposes of art or business as for those of science. The proper arrangement, for example, of a code of laws, depends on the same scientific conditions as the classifications in Natural History, nor could there be a better preparatory discipline for that important function than the study of the principles of a natural arrange-

[1] *Logic, B. VI., c. 1.*

ment, not only in the abstract but in their actual application to the class of phenomena for which they were first elaborated, and which are still the best school for learning their use."[1] And again—"These aberrations in medical theory have their exact parallel in politics."[2]

18. Here, at last, we might hope that we had attained a solid foundation. The preceding extracts contain as explicit and distinct an acknowledgment as it is possible for language to do, that in Mr. Mill's opinion the Science of Society—of which Political Economy is one branch—is to be investigated by methods exactly analogous to those which have already been adopted, and led to such distinguished success in Physical Science, and that the only hope of raising Social Science to the rank of a Demonstrative Science is by doing so. And when Bacon, Newton, Butler, Locke, J. B. Say, Comte, Herschell, and Mill are unanimous that Economic Science, as one of the Moral Sciences, is an Inductive Science, we might hope that the question as to the method of investigation proper to it was finally set at rest. We have seen, indeed, that COMTE, one of the loudest and most pretentious asserters of the doctrine, had made, when put to the proof, the most ignominious *fiasco* ever made by a man of such pretentions and at the same time of such real knowledge. But we might naturally expect that Mr. Mill, who at one time was a disciple of Comte's, and who on this point so clearly maintained the same doctrine, would at last exemplify the doctrine in practice, and give us a treatise on Political Economy, really framed after the manner of a Physical Science, consciously and deliberately.

II.—*Mr. Mill says the* A PRIORI *is the only proper Method to investigate Economics.*

19. What, then, is our astonishment to read:—"With the consideration of the definition of a science is inseparably connected that of the philosophic method of the science; the nature of the process by which its investigations are to be carried on, its truths to be arrived at.

"Now, in whatever science there are systematic differences of opinion—which is as much as to say in all the Moral or Mental Sciences, and in Political Economy among the rest; in whatever science there exist, among those who have attended to the

[1] *Logic, B. IV., c.* 8, § 5. [2] *Logic, B. V., c.* 6, § 5.

subject, what are commonly called differences of principle, as distinguished from differences of matter of fact, or detail—the cause will be found to be a difference in their conceptions of the philosophic method of the sciences."[1] Also:—"In the definition we have attempted to frame of the Science of Political Economy, we have characterised it as essentially an *abstract* science, and its method as the method *à priori*. Such is undoubtedly its character as it has been understood and taught by all its most distinguished teachers. It reasons, and as we contend it must necessarily reason, from assumptions, not from facts. It is built upon hypotheses, strictly analogous to those which, under the name of definitions, are the foundations of the other abstract sciences."[2] Again:—"This ought not to be denied by the Political Economist. If he deny it, then, and then only, he places himself in the wrong. The *à priori* method which is laid to his charge, as if his employment of it proved his whole science to be worthless, is, as we shall presently shew, the only method by which any truth can possibly be attained in any department of the Social Science!!"[3] Also:—"But we go farther than to affirm that the method *à priori* is a legitimate mode of philosophical investigation in the Moral Sciences—we contend that it is the only mode. We affirm that the method *à posteriori*, or that of specific experience, is altogether inefficacious in these sciences as a means of arriving at any considerable body of valuable truth; though it admits of being usefully applied in aid of the method *à priori*, and even forms an indispensable supplement to it."[4]

20. Now, we simply place these extracts before our readers, and ask—Is it not astonishing that they should proceed from the same writer, who enjoys a reputation as a logician?

> "Can such things be,
> And overcome us like a summer's cloud,
> Without our special wonder?"

We shall postpone the consideration of the reasons alleged by Mr. Mill for maintaining this extraordinary doctrine, so plainly contradictory to what he himself had set forth in the previous extracts, until we have examined his assertion as to a matter of fact. He asserts that *all* the most distinguished Economists have treated it as an *à priori* science. We have already

[1] *Essays upon some unsettled questions of Political Economy, p.* 141.
[2] *Ibid, p.* 143. [3] *Ibid, p.* 145. [4] *Ibid, p.* 146.

shewn that this assertion is utterly contrary to fact. J. B. Say, as we have shewn, expressly declares it to be an *experimental* science, and says that it is entirely founded on facts, and so far from sanctioning the *à priori* method of treating Political Economy, he expressly condemns those who do so. He says:—"Other considerations not less delicate relate to what precedes. Some writers of the eighteenth century, and of the dogmatic school of Quesnay, as well the English Economists of the school of David Ricardo, without employing algebraical formulæ evidently inapplicable to Political Economy, have wished to introduce into it a kind of reasoning, which as a general rule all sciences reject, which acknowledge no foundations but experience, I mean reasoning which rests on abstractions. * * * When we admit as a basis, instead of a well-observed fact, a principle which is only founded on disputation, we are in danger of imitating the schoolmen of the Middle Ages, who disputed about words instead of discussing facts, and who proved to be quite beside the truth."[1] And he gives instances where he considers, and in one at least justly, Ricardo and McCulloch to have fallen into error by adopting this method, and he dwells on the mischief produced in the Science by adopting this method. Speaking of Quesnay, he says:—"Instead of first observing the nature of things—namely, the way in which things really happen, classifying observations and educing general principles from them—they began by laying down abstract generalities, which they called Axioms, and which they taught were absolutely self-evident. They then tried to bring particular facts into accord with them, and deduced rules from them. This entangled them in the defence of maxims evidently contrary to good sense, and to the experience of ages."[2] While fully acknowledging their excellence as men, and also the real services they performed to the State, he says:—"But, on the other hand, the Economists did harm by decrying several useful maxims, by making it be thought by their sectarian spirit, by the dogmatic and abstract language of most of their writings, by their oracular tone, that all those who employed themselves in such researches were only dreamers, whose theories, however good they might seem in books, were inapplicable in practice."[3] He then points out that Adam Smith

[1] *Traité d'économie politique*, p. 15. [2] *Ibid*, p. 24 [3] *Ibid*, p. 25.

pursued exactly the opposite method—namely, the inductive method of educing principles from facts:—"When we read Smith as he deserves to be read, we perceive that there was no Political Economy before him." Again:—"Before Smith many true laws had been brought forward. He was the first to shew why they were true. He did more: he has given the true method of pointing out errors: he has applied to Political Economy the new method of treating the Sciences, in not searching out their principles abstractedly, but in going to facts most constantly observed, to the general laws of which they are a consequence. As soon as a fact may have a cause, the spirit of system decides that it is the cause. The analytical spirit wishes to know why such a cause produces such an effect, and to satisfy itself that it could not have been produced by any other cause. Smith's work is a collection of demonstrations which have raised many propositions to the rank of undoubted principles, and have plunged a greater number in the gulf where vague ideas and hypotheses, extravagant imaginations, struggle a short time, before being swallowed up for ever."[1]

Thus we see that Mr. Mill's assertion that *all* the most distinguished Economists have considered Political Economy as an *à priori* science, and have treated it so, is entirely disproved. Whether we agree on all points with Say is another matter, but every one must admit him to be a distinguished Economist, and we see plainly that he not only declares, in the most emphatic language, that it is an experimental and an inductive science, but he condemns by anticipation the very doctrines Mr. Mill has put forth in the extracts given above, and points out the mischievous effect they had already produced. We entirely concur in and adopt these views of Say. So far from *all* the most distinguished Economists having adopted the *à priori* method, it is only Ricardo and his followers who have done so in this country, and, as we shall shew in the subsequent part of this work, with the most pernicious consequences.

21. Having thus shewn that Mr. Mill is completely in error in his allegations of fact, and contradictory to himself on the method of investigation proper to the subject, we shall now examine the reasons he alleges for his last-mentioned doctrine. He says—"There is a property common to almost all the moral

[1] *Traité d'économie politique*, p. 29.

sciences, and by which they are distinguished from many of the physical; that is, that it is seldom in our power to make experiments in them. In chemistry and natural philosophy, we can not only observe what happens under all the combinations of circumstances which nature brings together, but we may also try an indefinite number of new combinations. This we can seldom do in ethical and scarcely ever in political science. We cannot, try forms of government, and systems of national policy, on a diminutive scale, in our laboratories; shaping our experiments as we think that they may most conduce to the advancement of knowledge. We therefore study Nature under circumstances of great disadvantage in these sciences, being confined to the limited number of experiments which take place (if we may so speak) of their own accord, without any preparation or management of ours, in circumstances, moreover, of great complexity, and never perfectly known to us, and with the far greater part of the processes concealed from our observation.

"The consequence of this invariable defect in the materials of this induction, is that we can rarely obtain what Bacon has quaintly, but not unaptly, termed an *experimentum crucis*."[1] Also—"Since, therefore, it is vain to hope that truth can be arrived at, either in Political Economy or in any other department of the Social Science, while we look at the facts in the concrete, clothed in all the complexity with which Nature has surrounded them, and endeavour to elicit a general law by a process of induction from a comparison of details; there remains no other method than the *à priori* one, or that of abstract speculation."[2]

22. And that this opinion is no hasty or ill considered one, is evident, because Mr. Mill repeats the very same argument in his later work—"We have thus already come within sight of a conclusion which the progress of the inquiry will, I think, bring before us with the clearest evidence, namely, that in the sciences which deal with phenomena, in which artificial experiments are impossible (as in the case of astronomy), or in which they have a very limited range (as in physiology, mental Philosophy, and the Social Science); induction from direct experience is practised at a disadvantage generally equivalent to impracticability, from

[1] *Essays upon some unsettled questions in Political Economy, p.* 146.
[2] *Ibid, p.* 148.

which it follows that the methods in these sciences, in order to accomplish anything worthy of attainment, must be, to a great extent, if not principally, deductive. This is already known to be the case with the first of the sciences we have mentioned, astronomy; that it is not generally recognised as true of the others, is probably one of the reasons why they are still in their infancy."[1] And we must protest against Mr. Mill's doctrine—"The deductive method, which in the present state of knowledge is destined henceforth irrevocably to predominate in the cause of scientific investigation. A revolution is peaceably and progressively effecting itself in Philosophy, the reverse of that to which Bacon has attached his name. That great man changed the method of the sciences from deductive to experimental, and it is now rapidly reverting from experimental to deductive."[2] Of this doctrine we shall have something more to say hereafter.

23. Mr. Mill's reason, therefore, for maintaining in exact opposition to what he had done before, that Political Economy is not an Inductive Science, is that it is not possible to perform an unlimited number of experiments in it, as may be done in some physical sciences. The slightest reflection will shew that this argument is quite untenable. It is not possible to perform experiments in Mental Philosophy, yet all the most distinguished cultivators of Psychology in modern times, have unanimously declared it to be an Inductive Science. It is not possible to perform experiments in comparative Philology, and yet, Max Müller strenuously urges that comparative Philology is a physical Inductive Science. And it certainly would be most monstrous to declare that comparative Philology is an *à priori* science. The power of performing experiments at will is by no means an *essential* feature of an Inductive Science, though, no doubt, it gives enormous advantages in some cases. It is rarely possible to perform experiments in Geology, yet if any one were to maintain that Geology is an abstract *à priori* science, few people now-a-days would care to listen to such a person. Mr. Mill's example of astronomy is scarcely relevant, because modern astronomy is undoubtedly founded on induction, and is only a branch of mechanics, which is certainly an Inductive Science. And there are many other sciences to which the preceding remarks are applicable. It is perfectly

[1] *Logic, B. III., c.* 7, § 3. [2] *Logic, B. III., c.* 13, § 7.

true that in Political Economy it is not generally possible to make experiments, except by those at the head of the State. We may therefore at once admit that a solitary inquirer has not the power of making an unlimited number of arbitrary experiments, and that he can only watch by direct observation those performed by the State, and these will be found to be amply sufficient for the purpose. But in Political Economy and the Moral Sciences generally—we can have what are in all respects equivalent to experiments—namely FEIGNED CASES. It is perfectly well known that when the application of a legal principle is doubtful, it is customary to *feign a case*, for the purpose of clearing up doubtful points, and the same is true of the Moral Sciences generally, and gave rise to the great Science of CASUISTRY, or Cases of Conscience. We can argue from feigned cases, and educe principles from them with exactly the same degree of certainty as if they were real cases; and also with the same degree of certainty as principles are tested by real experiments in experimental science.

24. But there is one point which must be particularly attended to, in arguing from feigned cases, drawn from the very analogy of experiments. The feigned cases devised for the purpose of eliciting principles must be possible. An experiment from its very nature is a possible combination of circumstances. Now in Political Economy, or in any Moral Science, no true principle can be elicited from an *impossible* case. It is not possible to predicate any result at all in such a case. Nor is this palpable truth of small importance. Writers who have adopted the *à priori* method have often argued from feigned cases, but they have not always observed this rule. We may cite one conspicuous example of the violation of this principle. In some attempts that have been made to show that an increase of the currency can have no effect in increasing the production of wealth, but would only raise the price of existing commodities, it is sometimes argued in this way—"Suppose," it is said, "people were to awake some morning, and find all their money doubled in quantity, what would be the effect? Simply that the prices of all commodities would be doubled." But the answer to this mode of arguing is, that it is an impossible case, and no principle can be educed from such a case. It is not possible that such a thing should happen, and all results

attempted to be deduced from such an example must be discarded as futile. If we would educe principles of any worth from a supposed case of the doubling of the quantity of the currency, we must strictly suppose it to be doubled in the way it would *really* happen.

25. There are then two great divisions of Inductive Science —Physical and Moral, both absolutely identical in their genius, both to be followed and cultivated by the same method. Now Physical Inductive Science often receives a name from the character of the method by which its general laws, or axioms, are proved, that is by observation and *Experiment*, and from this it is often called EXPERIMENTAL PHILOSOPHY. Now it seems to be of advantage to have a distinctive name for Moral Inductive Science, or that great branch of Inductive Science, whose axioms are tested by observation and *feigned cases*, or human *Experience*, and the name of EXPERIENTIAL PHILOSOPHY seems not inappropriate. Hence we have Inductive Science divided into two great provinces, Physical and Moral, which may be respectively called Experimental and Experiential Philosophy, and then we have this principle—What *Experiments* are to *Experimental* Science, *possible Feigned Cases* are to *Experiential* Science.

26. As soon as we admit this, it follows that the whole of that great body of Inductive Logic, the foundations of which were so widely and grandly, and securely laid by Bacon, and to which many additions and extensions have been made as new principles of Inductive Logic were evolved in the gradual formation of the various Inductive Sciences, for the purpose of framing conceptions, and testing axioms or general principles, by due experiments, is applicable to frame the conceptions and axioms of Experiential Science by properly devised feigned cases, if experiments cannot be had. Thus we have only to substitute "feigned cases" for "experiments" throughout, and we obtain an Inductive Logic for Experiential Philosophy.

27. Political Economy, or Economics, then, being admitted to be a Physical Science, we have next to inquire what is the nature of a Physical Science, and what are the indispensable methods necessary to be observed to build up and erect a great Inductive Science of Economics on solid and durable foundations?

CHAPTER II.

ON THE NATURE OF A PHYSICAL SCIENCE; AND ON THE FORMATION OF GENERAL CONCEPTIONS AND GENERAL AXIOMS.

1. As it is now generally admitted that Economics is a Physical Science, and is to be constructed in a manner analogous to that in which the various Physical Sciences have been constructed, it will be of advantage to make some general remarks on the nature of a Physical Science, and to lay down some general principles of reasoning which will assist us to decide various controversies in Economics which we shall have to consider.

2. A Physical Science is the body of laws which govern the phenomena relating to some single idea, or quality, of the most general nature appertaining to material substances; and whatever material quantity possesses that quality is an Element in that science, no matter what other qualities it possesses.

Thus, every substance which possesses divers qualities will be an element in as many sciences as it has qualities. And single qualities may exist in quantities of the most divers natures. It thus happens that in every science there are elements of divers forms and natures.

Thus the science of Arithmetic, or Algebra, is the science of number or measure; and, consequently, whatever can be numbered or measured is an Arithmetical, or Algebraical, Quantity. Thus quantities of the most divers natures are brought under the dominion of Arithmetic or Algebra, simply from their capability of being measured.

Thus time, space, velocity, material substances of all sorts, which have no other property in common but the capability of being measured, are all Arithmetical or Algebraical Quantities.

3. So the Science of Mechanics in its most general form treats of Forces. And these Forces are of the most divers forms and natures, and agree in nothing except that their effects can be measured.

The general definition of Force in Mechanics is—*Anything which causes, or tends to cause, motion.*

Thus some forces are material and corporeal, such as men, animals, &c. Others are incorporeal, invisible, and intangible, like gravity, electricity, magnetism, &c. Other forces are explosive, like gunpowder, &c. There is also the force of the wind, steam, and others.

Now, all these forces of the most divers natures are all Mechanical Quantities, because they all satisfy the mechanical definition of Force.

4. So Chemistry is the science of the combination of molecules, and there are bodies of divers forms, solid, liquid, and aeriform.

5. So in Optics and Heat, we have to consider how all sorts of bodies or substances, solid, liquid, or aeriform, affect Light, or are affected by Heat.

6. Now, as these are all experimental sciences, or sciences of causes and effects, the fundamental condition of any body of phenomena being capable of being erected into a science is that some method must be discovered of *measuring* the effects. Thus Heat could never have been erected into a science without the invention of the thermometer.

The whole certainty of the belief in Physical Science rests upon this, that the Creator has impressed or endowed material substances with certain fixed, uniform, and unchangeable qualities, and that similar causes will always produce similar effects or phenomena, and when once the laws which govern the phenomena are ascertained by observation and experiment, and truly expressed in accurate language, we are always able to predict the consequences or effects that will follow from definite causes.

7. Now if there be, as is asserted, a Moral Philosophy composed of a number of distinct Moral Sciences, as Physical Philosophy is composed of distinct Physical Sciences, what can it mean? And how is a Moral Science to be created on the analogy of a Physical Science?

It can only mean this—That man, like physical substances, is endowed with divers moral qualities, properties, or passions, such as Hope, Fear, Anger, Shame, Desire, Resentment, &c. Certain causes acting upon these different passions, or qualities,

produce effects in men. Now, if these passions or qualities were as uniform and invariable in men as the properties or qualities are in physical substances, and if the same causes produced the same effects uniformly and invariably on each of these qualities in men, and if any means could be discovered of measuring these effects—if, in short, we could invent a THUMOMETER, as well as a THERMOMETER—then each of these qualities or passions might be made the subject of a distinct Moral Science, as certain as a Physical Science, and we should have a body of Moral Philosophy as certain as, and analogous to, Physical Philosophy.

8. Men, however, it is well known, are not endowed with these moral qualities in the same uniform and invariable manner that physical substances are. A person deeply conversant with human nature may, no doubt, prognosticate the effects that will be produced on masses of men by certain causes, and on this knowledge of human nature is founded the power of the Statesman, the Orator, and the Poet. But it is not certain that each separate man will be amenable to these influences. It is a common observation that it is much easier to know human nature in general than any man in particular. It is also well known that these effects produced in men are not capable of any numerical measurement. Though, therefore, it is undoubtedly true that the general principles of reasoning are the same in Moral as in Physical Science, yet, from the want of uniformity in the properties or passions, and the impossibility of devising a means of measuring their effects, they are not capable of being carried to the same state of perfection as the Physical Sciences.

9. Nevertheless, if there be any Moral Science founded on any quality of men which prevails, and has prevailed, among men of all ages, countries, and varieties, with the same uniformity and invariability as the qualities of physical substances do—and more especially if its effects can be measured numerically—such a Moral Science may be erected into a science closely approximating to the precision and the certainty of a Physical Science: and a Moral Inductive Science may be created by observing the phenomena relating to that quality, and following the same course of generalizing the Laws which govern these phenomena, in all respects analogous to a great Physical Inductive Science.

10. Now, Political Economy, or Economics, is declared to be a Moral Science and an Inductive Science, and it is contended that it is to be constituted and erected into a science in the same manner as a Physical Science. What can this mean? and how is this to be done?

It is perfectly well agreed now by all Economists that Economics is the science which treats of things so far as they are *Wealth*. It is the science which treats of the Laws which govern the phenomena of wealth.

Now, without inquiring yet what wealth is, and what that quality of things is which constitutes them "Wealth," we may lay down these preliminary considerations which must govern the course of the inquiry, and the method of constructing the science. The quality which constitutes things "Wealth," must be some SINGLE quality of the most general nature; and the Science of Wealth must be the science of the phenomena resulting from that quality.

11. Following the analogy of Physical Science, we may lay this down, that whatever quality that may be defined to be which constitutes a thing Wealth—without at present in the slightest degree anticipating what it may be—we may say that in whatever that quality may be found to exist—it must be technically WEALTH, whatever its nature be, and whatever other qualities it may possess. Arguing from the strictest analogy of Physical Science, we may say that *whatever* satisfies the Economic definition of Wealth, is an Economic Quantity, or Wealth—whatever other qualities it may possess. And Economics treats exclusively of the phenomena relating to that quality, and takes no notice whatever of any other qualities the quantity may possess, or of the phenomena relating to them. Just as we may consider man purely as a mechanical force, and without reference to any other qualities he may possess, moral or physical.

12. So much for the general conception of the science. We have to search for, and ascertain what that quality is which constitutes things Wealth, and then we have to search for and discover all the different species of quantities which satisfy that definition.

Thus, with respect to glass, diamonds, oils, and other things, we know the qualities which bring them under the dominion of

Chemistry, Optics, Heat, Electricity, &c., but what is that quality which brings them under Economics, or makes them Economic Quantities?

Now, arguing from the general analogy of Physical Science, and without in the least anticipating any controversies we may hereafter find to prevail on the subject, we may say that we may naturally expect that there will be found to be quantities of several divers and distinct natures which will satisfy the Economical definition of Wealth, and consequently be Economic Quantities. And it is clear that we must take care to search for and ascertain all these different species of quantities, because if we omit any, those conceptions and principles which may be founded on contemplating only certain species will probably be found to be partial and erroneous, and not true as general conceptions and general laws, and they will vitiate the results obtained. It is infinitely better to commence at first by ascertaining that we have included *all* species in our Conceptions and Axioms, than afterwards to have to pull down, widen, enlarge, and re-construct our system from careless omissions in the first instance.

Thus we see clearly the nature of a science. Our future object will be to discover to what body of phenomena the name of Political Economy, or Economics, is applicable.

On the Formation of General Conceptions and General Axioms, or General Principles.

13. The nature of a science being thus determined, the next point is to construct it, or to discover the laws which govern its phenomena, or in other words to be able to explain the phenomena.

Every science consists of two parts—1st, General Conceptions or Definitions, or a due classification of the quantities it treats about, and 2ndly, the Laws which govern their relations, called by Bacon, Newton, and many others, Axioms or General Principles.

14. By that mysterious correlation which holds between reasoning and reality, it is invariably found that if conceptions of things are framed which are true to nature, and results are calculated according to reasoning which is also true to nature,

they will be found to correspond to reality. That is, if true Conceptions are framed, and truly reasoned about, results may be *predicted.* But if results are calculated, and it is found that they do not correspond to nature, but are palpably and notoriously erroneous, then we are immediately certain that either the conception or the reasoning must be erroneous.

15. Bacon says that there is a great and almost radical distinction between minds in regard to Philosophy and Science; that some are more apt to perceive the difference of things, and others the resemblances. This distinction, though often insisted upon as fundamental, will perhaps, appear to be less radical if we consider that to do each accurately, depends upon the same general power of the mind, namely, that of separating complex terms into their elementary ideas, and discerning which are the subordinate ones. When the leading qualities in quantities are identical, they must be classed together, even although some of the subordinate ones are opposite. On the other hand, when the leading properties are opposed, there is a fundamental distinction between the quantities, even though some of the subordinate ones are similar. Thus the same general analytical power of the mind enables us to annihilate spurious identities, and also to detect latent similarities. Now, all true classification, which is as much as to say all true science, is based upon perceiving fundamental analogies beneath superficial differences, and fundamental distinctions beneath superficial resemblances.

16. Now, the formation of Definitions, or Conceptions, is not arbitrary, or dependent on the will of the writer. Their formation as well as that of Axioms, or General Laws, is strictly subject to certain general Philosophic Laws.

We may state two canons of fundamental importance:—

I. The Fundamental Conceptions and Axioms of every Science must be perfectly general.

II. No General Conception and no General Axiom, must contain any term, involving more than one Fundamental Idea.

The truth of this latter canon is manifest, because if any term involve more than *one* fundamental idea, it limits the Conception or Axiom, which is contrary to the first canon.

Consequently, if we wish to bring Economics to the state of

an exact science, we must carefully examine all its fundamental Conceptions and Axioms, and reduce them to the state of generality and simplicity, required by the above canons. Hence, if we meet with Conceptions and Axioms which violate them by containing several ideas, we must apply the general principles of Inductive Logic to discover which is the true general idea, and eliminate all other accidental, particular, or intrusive ideas.

On the Formation of General Conceptions.

17. Socrates, says Aristotle, was the first to frame general definitions, because he saw that all systematic reasoning must be based upon definitions; and every philosopher of note, from that day to this, has repeated the same thing. The chief charge alleged by Bacon against the Logic of the schools was, that it was wholly incapable of penetrating the recesses of nature. "The Syllogism consists of propositions, propositions of words, but words are the tokens and signs of Conceptions. So that, if the very conceptions of the mind (which are, as it were, the soul of words and the foundation of this superstructure and edifice) are badly and inconsiderately formed from the facts, vague, nor sufficiently definite and limited, faulty in short in every way, it ruins every thing."[1] Over and over again he repeats that the formation of Conceptions, or Definitions, and Axioms, or General Laws, by true induction is the only way of expelling fallacies. So, in affirming that the Conceptions and Axioms of his own day were utterly worthless, he says:—"The discoveries already made in the sciences are of such a sort as scarcely to be below the surface of the vulgar notions; but, in order to penetrate to the deep recesses of nature, both Conceptions and Axioms must be derived from facts, by a more certain and guarded method."[2] Again:—"The formation of Conceptions and Axioms, by a true induction, is assuredly the true remedy to drive away and expel fallacies. And of these fallacies, the fallacies of language (*Idola fori*), which men gain from one another by common discourse, are the most troublesome of all. For the ill and unfit choice of words wonderfully obstructs the understanding. For words plainly exert a power over the understanding, and throw everything into confusion, and lead

[1] *Distributio Operis.* [2] *Nov. Org., B. I., Aph.* 18.

men away into numberless empty controversies and phantasies; for men believe that their understanding controls their language, but it is also true that language re-acts and turns back its power over the understanding, which is the very thing which has rendered philosophy and the sciences sophistical and inactive. But words are commonly framed by the capacity of the vulgar, and divide things according to the lines which are most obvious to the minds of the vulgar. And whenever a clearer intellect and a more careful observation wishes to shift these lines to a truer agreement with nature, words cry out against it. Thus it happens that great and important discussions of learned men often turn into controversies about words and names, with which, according to the wise custom of mathematicians, it would be more prudent to begin, and so bring them into order by Definitions."[1]

Again—"The formation of ideas or true Conceptions and Axioms by true induction is, no doubt, the proper remedy to be applied for the keeping off and clearing away fallacies. To point them out is of great use; for the doctrine of fallacies is to the interpretation of nature what the doctrine of the refutation of sophisms is to common Logic."[2] Also—"The fallacies which words impose upon the understanding are of two sorts. They are either names of things which do exist, but are confused and ill defined, and hastily and irregularly formed from the facts. And this class which is formed by a bad and unskilful abstraction is intricate and deeply rooted."[3]—"And the assistance of this induction is to be used, not only in discovering general laws, but also in the formation of conceptions. And assuredly in this induction the chief hope lies."[4]

Bacon then places the foundation of all science in the extirpation of fallacies (Idols) and the obtaining true general conceptions (Ideas) from nature and reality itself by genuine induction, which are not to be fanciful fictions of the mind. He maintains that conceptions are to be obtained in the same manner as Axioms or General Laws. But he has not given any examples of his method, nor indeed was it possible that he should do so. No Logic can shew how it can be done. It is the part of Imagination, or Invention, to devise and suggest fundamental

[1] *Nov. Org., B. I., Aph.* 89.
[2] *Nov. Org., B. I., Aph.*, 60.
[3] *Nov. Org., B. I., Aph.* 40.
[4] *Nov. Org., B. I., Aph.* 105.

conceptions, and of Logic to determine whether they be true or not. The Baconian method of induction has been far more generally applied to General Laws than to Conceptions. From whence some have drawn the conclusion that his method is practically useless. We hope that we shall be able to shew that this is not so, but that the Baconian, or Inductive, Logic may be applied with decisive effect in determining the controversies which prevail up to the present hour as to every single General Conception in Economics.

And most men eminent as clear thinkers since the days of Bacon have dwelt upon the importance of true conceptions. Thus Hobbes says—"In the right definition of names lies the first use of speech, which is the acquisition of science. And in wrong or no definitions, lies the first abuse from which proceed all false and senseless tenets." And again—"Every man who aspires to true knowledge should examine the definitions of former authors, and either correct them, or make them anew."[1]

One of the most valuable parts of Locke's Essay, is that in which he dwells upon and enforces the necessity of accurate general terms, and the importance of refining and polishing common language for philosophical purposes. And he especially notes the mischievous consequences that follow from the inconstant use of them—"It is hard to find a discourse written upon any subject, especially of controversy, wherein one shall not observe, if he read with attention the words (and those commonly the most material in the discourse and upon which the argument turns) used sometimes in one collection of simple ideas, and sometimes for another, which is a perfect abuse of language. Words being intended for signs of my ideas to make them known to others, not by any natural signification, but by a voluntary imposition, it is plain cheat and abuse, when I make them stand sometimes for one thing and sometimes for another; the wilful doing whereof, can be imputed to great folly, or greater dishonesty."[2] Again—"Knowledge and reasoning require precise determinate ideas. The multiplication and obstinacy of disputes, which have so laid waste the intellectual world, is owing to nothing more than to this ill use of words. For though it is generally believed that there is great diversity of opinions, in the volumes and variety of controversies the

[1] *Leviathan, pt. I., c.* 4. [2] *Essay, B. III., c.* 10, § 5.

world is distracted with, yet the most I can find that the contending learned men of different parties do, in their arguings one with another, is, that they speak different languages."[1] Locke then says that by proper attention being paid to language, Moral Science may be reduced to demonstration.—"Upon this ground it is, that I am bold to think that Morality is capable of demonstration, as well as mathematics; since the precise real essence of the things moral words stand for may be perfectly known. * * * And, therefore, the negligence and perverseness of mankind cannot be excused, if their discourses in morality be not much more clear than those in Natural Philosophy. * * * Yet this, the least that can be expected, that in all discourses, wherein one man pretends to instruct or convince another, he should use the same word constantly in the same sense; if this were done, which nobody can refuse without great disingenuity, many of the books extant might be spared: many of the controversies in dispute would be at an end, several of these great volumes, swollen with ambiguous words now used in one sense, and by and bye in another, would shrink into a very narrow compass."[2] How true all this is of Economics, any one who has read the subject can tell!

So also Mr. Mill perfectly acknowledges in a general way the importance of true conceptions. "How to define a name may not only be an inquiry of considerable difficulty and intricacy, but may involve considerations going deep into the nature of the things which are denoted by the name."[3] Again—"Few people have reflected how great a knowledge of things is required to enable a man to affirm that any given argument turns wholly upon words. There is, perhaps, not one of the leading terms of philosophy which is not used in almost innumerable shades of meaning to express ideas more or less widely different from one another. Between two of these ideas a sagacious and penetrating mind will discern, as it were intuitively, an unobvious link of connection, upon which, though perhaps unable to give a logical account of it, he will found a perfectly valid argument, which his critic not having so keen an insight into the things, will mistake for a fallacy turning on

[1] *Essay, B. III., c.* 10, § 22. [2] *Essay, B. III., c.* 2, § 16, 17, 26.
[3] *Logic, B. I., c.* 8, § 7.

the double meaning of a term. And the greater the genius of him who safely leaps over the chasm, the greater will probably be the crowing and vain glory of the mere logician who, hobbling after him, evinces his own superior wisdom by pausing on its brink, and giving up as desperate his proper business of bridging it over."[1] And concluding the chapter, he says—"And since upon the result of this inquiry respecting the causes of the properties of a class of things, there incidentally depends the question what shall be the meaning of a word, some of the most profound and most valuable investigations which philosophy presents to us have been introduced by, and have offered themselves under the guise of inquiries into the definition of a name."[2]

After so distinctly recognizing the importance of true definitions, it might naturally be expected that Mr. Mill should bestow extraordinary care on the ascertainment and settlement of the Fundamental Conceptions of Economics, the obscurity and confusion of which, every one knows, have given rise to the greater part of the controversies in the subject. But just as in the former case, where Mr. Mill, after having amply acknowledged that Moral Science is to be cultivated in the spirit and method of Physical Science, when he comes to Economics in particular, turns his back upon himself, and maintains that it is an *à priori* science; so here, after amply acknowledging the importance of true Philosophical Conceptions, when he comes to Economics he says—"It is no part of the design of this treatise to aim at metaphysical nicety of definition where the ideas suggested by a term are already as determinate as practical purposes require."[3] But what definition in Economics is as determinate as practical purposes require? Not a single one! And in a subsequent chapter we shall see how contradictory are many of Mr. Mill's definitions.

On the Formation of General Axioms.

18. Having obtained General Conceptions or Definitions of Quantities treated about, our next purpose is to discover the General Law which governs their relations to each other, and in searching for this, we must observe that, there can be but

[1] *Logic, B. I., c.* 8. § 7. [2] *Logic, B. I., c.* 8, § 7. [3] *Pol. Econ., p.* 2.

ONE General Theory at the basis of all phenomena. In particular classes of cases, there may undoubtedly be other circumstances which may aggravate, neutralize, or overpower, and seemingly reverse the General Theory; but for all that, it is there, and acts universally. In several different sciences no doubt different General Theories have prevailed, such as in Astronomy, Optics, Heat, Electricity, &c.; but no Physical Philosopher ever dreamt of explaining every different class of phenomena by a distinct theory. No one ever thought of writing a book on Astronomy, in which one chapter was written on the Ptolemaic Theory, another chapter on the Copernican Theory, and another chapter on Tycho Brahe's Theory. No one ever thought of writing a book on Optics, one part of which was based upon the Emission Theory, and another on the Wave Theory of Light, and so on of the other sciences. It has always been clearly understood that there could be but ONE General Theory which governed all phenomena, though liable to be modified by disturbing causes in particular cases. And the business of the Physical Philosopher has always been to discover which is the true General Theory; and the grand business of the Baconian, or Inductive, Logic, has been to discover and lay down the principles which are to decide which is *the* true Theory. In politics, no doubt, we require the spirit of compromise, and many contradictions are tolerated for the sake of general peace. But in science, toleration and compromise are impossible. It is always a mortal combat between rival theories. All but one must perish; and it is the business of Inductive Logic to pronounce the doom of Life or Death.

Now without even yet determining what Economics is, we may lay this down, that if it be a Physical Science, as is so often asserted, there can be but ONE General Theory of the relations between Economic Quantities. To break up Economic phenomena into distinct classes of cases, and to maintain that there is a distinct fundamental Theory, or Axiom, or Law, governing each class of cases, would be utterly abhorrent to the fundamental principles of Natural Philosophy.

Bacon gives abundant precepts for the determination of the truth of rival theories, and he enforces the necessity of carefully devised experiments (and in the Moral Sciences possible feigned

cases), and the attention necessary to contrive a variety of them, and to extend the inquiry generally. "For no one successfully investigates the nature of a thing in the thing itself." And he advises us to imitate the Divine Wisdom, which in the first day created light only. So we must endeavour to gather from all sorts of experience, and to discover true causes and general principles, and to devise "*experimenta lucifera*" for this purpose, or instances contrived with the express view of testing general principles before we go to practice. For he says that all true knowledge consists in knowing true causes, and that which in Theory is the cause, in Practice is the rule. "For though we are chiefly in pursuit of the practical and active part of science, we must wait for the time of the harvest, and not reap the moss or the green corn. For we well know that general principles once rightly discovered, will carry whole troops of works with them, and will produce effects not in single instances, but in multitudes." [1]

Some writers of eminence, indeed, seem to think that Bacon has neglected too much, or even omitted, the deductive part of science, or the explanation of phenomena by general principles. But we cannot agree to this. He has clearly and repeatedly asserted that his Philosophy consists, *first*, of the eliciting general conceptions and general axioms from particular cases —the Inductive part—the *ascending* to abstract principles from concrete cases; and, *secondly*, the *descending* part, or the application of general principles, so obtained by Induction, to the explanation of phenomena. "Axioms duly and orderly formed from particulars, easily discover the way to new particulars, and thus render sciences active."[2]—"The true method of experience, on the contrary, first lights the candle, and then by means of the candle shews the way; commencing as it does with experience duly ordered and digested, not bungling or erratic, and from it educing Axioms, and from established Axioms again new experiments." [3]—"From the new light of Axioms, which, having been educed from these particulars by a certain method and rule, shall in their turn point out the way again to new particulars, greater things may be looked for. For our road does not lie on a level, but *ascends* and *descends*; first ascending to Axioms,

[1] *Distributio Operis.* [2] *Nov. Org., B. I., Ap.* 24.
[3] *Nov. Org., B. I.*, 84.

then descending to works."[1]—"And the truth is that the knowledge of simple natures well examined and defined is light; it gives entrance to all the secrets of nature's workshop, and virtually includes and draws after it whole bands and troops of works, and opens to us the source of the noblest axioms."[2]

It clearly appears, therefore, that *Deduction* was not only an essential part of the Baconian Philosophy, but its very aim and object, because it was the *practical* part of it. The very aim of Bacon was, by discovering true science or the knowledge of causes, to be able to govern the world of reality, or effects. To say, therefore, that Bacon omitted the Deductive part is manifestly as great an error as that of J. B. Say, who declared that Bacon was quite ignorant that the method of his Philosophy was applicable to anything but Physical Science. Mr. Mill is, therefore, also in error when he says that a revolution in science is peaceably taking place, and that we are reverting from the Inductive to the Deductive method. Even if it were true, it is not a revolt from, but the express fulfilment of, the Baconian Philosophy. And we think the example Mr. Mill has selected peculiarly unfortunate, because the practical triumphs of the astronomer are entirely due to the Theoretical, or Inductive, discovery of the fundamental Laws of Mechanics. Astronomy is nothing whatever but a practical example of the general laws of Mechanics, and is the most sublime proof of the truth of the Baconian Philosophy.

19. One of the great fundamental Laws of Inductive Logic pervading every part of the *Novum Organum*, and expressing its very spirit, is called the *Law of Continuity*, and is thus described by Whewell, *Nov. Org. Renov.*, p. 221:—

"*A quantity cannot pass from one amount to another by any change of conditions, without passing through all the intermediate magnitudes, according to the intermediate conditions.*"

This Law may often be employed to correct inaccurate deductions, and to reject distinctions which have no real foundation in nature. For example: The Aristotelians made a distinction between motion according to nature (as that of a body falling vertically downwards) and motion contrary to nature (as that of a body moving along a horizontal plane); the former they held became naturally quicker and quicker, the latter naturally slower

[1] *Nov. Org., B. I., Ap.*, 103. [2] *Nov. Org., B. I., Ap.*, 121.

and slower. But to this it might be replied that a horizontal line may pass by gradual motion through various inclined positions to a vertical position, and thus the retarded motion may pass into the accelerated; and hence there must be some inclined plane on which motion is naturally uniform, which is false, and therefore the distinction of such kinds of motion is unfounded." That is to say, there is no point whatever at which one kind of motion passes into another. Again:—"The evidence of the *Law of Continuity* resides in the universality of those Ideas, which enter into our apprehension of Laws of Nature. When of two quantities one depends upon the other, the Law of Continuity necessarily governs the dependence. Every philosopher has the power of applying this Law in proportion as he has the faculty of apprehending the Ideas which he employs in his Induction, with the same clearness and steadiness which belong to the fundamental Ideas of Quantity, Space, and Number. To those who possess this faculty, the Law is a rule of very wide and decisive application. Its use, as has appeared in the above example, is seen rather in the disproof of erroneous views, and in the correction of false propositions, than in the invention of new truths. It is a test of truth rather than an instrument of discovery"[1]—which, we may observe, is the true function of all Logic, both Aristotelian and Baconian—formal and inductive.

The Law of Continuity is one of the most powerful weapons of Inductive Logic, and is of very wide application in Physical research. It has been employed with immense effect in settling the fundamental conceptions of Mechanics, Electricity, Geology, and indeed of every other science. Its capability of being applied to settle the fundamental Conceptions and Axioms of Economics has never yet, that we are aware of, even been suspected! And yet we shall shew that it is capable of absolutely deciding and determining once and for ever, the greater portion of the controversies in Economics.

The great philosophers who founded the Physical Sciences instinctively obeyed the Laws of the Baconian, or Inductive, Logic, which are undoubtedly true in the main. In fact this Logic, must have been necessarily evolved in the process of the formation of those sciences. Because in all controversies it is necessarily assumed that there is some supreme power

[1] *Whewell, Nov. Org., Renov., p.* 223.

which is admitted to be capable of deciding authoritatively on all scientific discussions, which must be yielded to by both parties, or else there is no prospect or possibility of bringing the discussions to a final end. And that supreme power is the REASON, the Divine ΛΟΓΟΣ, or LOGIC—the common property of GOD and MAN.[1]

> "Know that in the soul
> Are many lesser faculties that serve
> REASON as chief; among these Fancy next
> Her office holds; of all external things,
> Which the five watchful senses represent,
> She forms imaginations, aery shapes,
> Which Reason, joining or disjoining, frames
> All what we affirm or what deny, and call
> Our knowledge or opinion; then retires
> Into her private cell, when Nature rests.
> Oft in her absence mimic Fancy wakes
> To imitate her; but, misjoining shapes,
> Wild work produces oft—
> Ill matching words and deeds."

The wonderful sagacity of Bacon was that he anticipated this natural process, and first created that science of sciences, which rules every particular science with supreme power. All controversies in Economics both as to Conceptions and Axioms must be brought to the tribunal of this supreme power, and must be decided by exactly the same general principles of Inductive Logic, as have already decided finally the controversies in Physical Science.

20. We shall endeavour in the next three chapters to shew the application of the principles we have been considering. In the first place we shall give a narrative of the differences of opinion, or a History of the Ideas that have prevailed as to the nature and limits of the science of Economics itself, and employ the principles of Inductive Logic to determine which is the true one. We shall frame a Definition, or precise Conception of the Science, clearly expressing the body of phenomena, whose laws it is our business to discover.

The next chapter investigates the Fundamental Conceptions of the Science, and brings together various controversies and discussions which have been held on each of them, and

[1] *Cicero De legibus, B. I.*, § 5.

shews the application of Inductive Logic to determine which are the true General Conceptions.

The chapter after that investigates the General Theory of the Science, or the General Law which governs the relations of Economic Quantities. It also states and discusses the different theories that are current, and shews the application of Inductive Logic to determine which is the true General Theory.

This completes the Inductive, or Theoretical, portion of the Science, in which true Conceptions and Axioms are obtained by genuine Induction from nature itself.

We then come to the Deductive, or Practical, portion of the Science, which exhibits the application of these principles to explain the phenomena of Economics; thus giving an example of the complete formation of a great Moral Science, both Inductive and Deductive, after the strictest model of a Physical Science, on rigorous Baconian principles.

CHAPTER III.

ON THE HISTORY OF IDEAS AS TO THE NATURE AND LIMITS OF THE SCIENCE OF POLITICAL ECONOMY, OR ECONOMICS.

SECTION I. HISTORY OF ECONOMICAL IDEAS UNTIL THE RISE OF THE ECONOMISTS IN FRANCE.

SECTION II. THE FIRST SCHOOL OF MODERN ECONOMISTS IN FRANCE, CALLED THE PHYSIOCRATES.

SECTION III. THE SECOND SCHOOL OF ECONOMISTS.

SECTION IV. THE THIRD SCHOOL OF ECONOMISTS.

1. The first thing to be done in the study of any science is to endeavour to form a proper conception of its nature and limits: then to examine it in its whole extent up to those limits, and to refrain rigidly from all discussions and inquiries which transgress them. In many sciences this is no easy task, but in none is it so difficult as in Political Economy, or Economics. In no other science have eminent writers taken so different and various views of its nature and extent: have differed so much as to what should be included in it; or have so varied in their treatment of it. There is nothing in the name of the science which would appear to mark out its precise limits. Seeing then the wide division of opinion on the subject, the best way will be to give a succinct History of the Ideas which have prevailed as to its nature and extent, and to point out the philosophic reasons which shew the superiority of one system.

Aristotle the founder of the Science of Political Economy, or Economics.

2. Aristotle may be considered as the founder of the science of Economics. He treats of Man in his relation to himself, or ETHICS; in his relation to other men, both in his private and his

public capacity, or POLITICS; and in his relation to property, or ECONOMICS. And he considered Economics as the method by which a revenue is acquired. In the second book of the *Economics*, which, though it is supposed by the best critics not to be by him, is yet of his school, four species of Economy are described, the Regal, the Satrapical, the Political, and the Domestic. The first two relate to the manner in which a Monarchical and a Satrapical Government raise a revenue. The third how a *Free State* (πόλις) raises a revenue; and the fourth and last, how a private person earns an income. Thus we see that the expression POLITICAL ECONOMY in this treatise, the first in which it occurs, denotes the method in which a Free State raises a revenue.

3. In his *Ethics* and *Politics* several of the true general Conceptions of Economics are given, such as *Wealth*, *Currency*, *Value*, to which men have at length come back, after having strayed away from them for many centuries. And it would have been well for mankind had they never abandoned them, as their having done so has been the cause of incredible calamities.

We may observe here that Aristotle defines WEALTH to be anything whose value can be measured in money; VALUE to be the relation which anything bears to something else; and MONEY to be a pledge for future payment, which are the true fundamental conceptions of the science.

4. Xenophon has left us a Dialogue, in which he makes Socrates discourse on Economy, which he says is a distinct science like medicine, and architecture, in which he points out that Οἶκος, did not mean a house which was οἰκία, but all that a man possessed, all his substance, or estate. And this was the meaning of the word in Attic Law, as we have shewn in a subsequent section.

5. Among the few remaining Economical treatises of the Ancients, a very remarkable one may be mentioned. It is entitled the *Eryxias*, and passes under the name of Æschines Socraticus, though the best authorities deny its genuineness. It is a Socratic dialogue *On Wealth*. Socrates asks what Wealth is. He mentions the Carthaginian leather money, the Spartan iron money, the Æthiopian pebble money, and says that each of these was wealth in its own place, and the more any one possessed of them in these places respectively, the

more wealthy he was. But they were of no use, and were not wealth anywhere else. Socrates then points out that things are only wealth where they are wanted, and that nothing is wealth which is not wanted. But, if we can purchase what we want with anything as well as gold and silver, that thing is wealth, whatever its nature be. Thus he says that, if a person gains a living and can purchase necessaries by teaching music, science, or grammar, then such music, science, and grammar are as much wealth as gold and silver. This dialogue is for the express purpose of shewing that the idea of wealth depends exclusively upon *Exchangeability*, and that whatever is exchangeable, or has the power of purchasing, is wealth, no matter what its nature be, and that materiality is in no way necessary to constitute a thing wealth. This species of wealth in modern times is usually called Immaterial Wealth.

6. We now come to Roman Law. In the Institutes of Justinian, Property or Wealth is divided into two sorts—Corporeal and Incorporeal. Corporeal property is tangible, as lands, slaves, clothes, gold, silver, and other things. Incorporeal property is what is not tangible, but consists in Rights only, as, for instance, obligations of all sorts. It is said by Ulpian that Property or Wealth is anything which may be bought and sold. And it is expressly declared in the Pandects of Justinian that, "Rights are included under the name of Wealth;" and again, "Under the name of Money, or Wealth, not only ready money, but every thing moveable and immoveable, corporeal as well as *Rights*, are included." So also *merx*, or merchandize, included every thing capable of being bought and sold, moveable or immoveable, corporeal or incorporeal.

We merely notice these two latter species of wealth here, and shall enter into the question more fully in the next chapter, under the Definition of Wealth.

7. We thus see that in ancient times the principle of Wealth was held to reside exclusively in the quality of EXCHANGEABILITY: and that whatever was exchangeable was WEALTH. We also see that ancient writers had noticed three different species of exchangeable quantities; *first*, Material or Corporeal things, such as gold, silver, lands, houses, &c.; *secondly*, Immaterial things, such as sciences, or labour; and, *thirdly*, Incorporeal things, such as Rights of all sorts.

Rise of Economical Ideas in Modern Times.

8. In modern times Economic treatises have generally sprung from the public misery caused by the violations of the true principles of the science, just as the science of medicine sprung from human diseases. The first and readiest resource of despotic princes was to tamper with the coinage—to defraud the public by reducing the established weight and fineness of the money. The mischievous consequences of this were already noticed by Dante, and proceeded to great length in France, Italy, Spain, Germany, and Scotland, and to not so great length in England. These violations of true principles called forth a long series of able treatises in France, Italy, Germany, and England, which are more particularly noticed in the chapter on the Coinage, and we may say that the Theory of the Coinage was the first great branch of Economics which was firmly established in modern times.

The History of Economical Ideas until the rise of the Economists, or Physiocrates, in France—the First School of modern Economists.

9. Up till the beginning of the 16th century there had been many capricious and contradictory laws in all countries regarding the importation and exportation of products, sometimes prohibiting their entrance, sometimes letting them go free: but there had been no definite theory, or fixed principles suggested, upon which legislation should be founded with a determinate object. About that period, however, certain ideas began to prevail about public Wealth, and legislation was framed to effect certain national objects by certain definite means. Thus attention was directed to establish principles, and distinct systems, which after undergoing several mutations and revolutions of opinion, have finally terminated in the modern science of Economics. We now propose to give a succinct sketch of these changes of opinion and revolutions in national policy.

The Mercantile System and the Balance of Trade.

10. Once on a time, say the poets, the Phrygian peasants captured Seilenus, the teacher of Bacchus, and took him before their king Midas, who entertained him jovially for ten days,

Midas

and then restored him to his heavenly pupil. Bacchus was so pleased that he promised to grant the hospitable mortal any reward he chose. Midas asked that whatever he touched might be turned into gold. Bacchus immediately granted the request, merely observing that he wished he had asked for something better, and departed. Midas hastened to put his new power to use. He tore off a twig from a tree—it became gold. He picked up a stone—it was gold. He touched the ground—it was gold. He gathered some ears of corn—they were gold. He plucked an apple—it seemed as if it had come from the gardens of the Hesperides. He opened the doors of his palace—they were gold. He washed his hands—it seemed like the shower of Danae. His slaves placed a feast before him—the bread and the meat forthwith became gold. He mingled wine with water—and there gushed out a golden fluid. But gold would neither appease his hunger nor quench his thirst. He was perishing of hunger and thirst amid boundless treasures! Then he raised his hands in prayer to the god, and cried out that he had erred, and besought him to have mercy, and take away his fatal gift. The god graciously heard him, and granted his prayer, and bade him bathe in the Pactolus which thenceforth rolled down its golden sands to the sea. Midas, cured of his folly, betook himself to agriculture and the chase, and grew wealthy and powerful.

Midas was the parent of the Mercantile System, and for several centuries every Government in Europe was imbued with his ideas; though alas! with more direful consequences, for unluckily there was no merry god at hand to release them from their folly.

Midas saw that, with treasure in his hand, he was wealthy—he could obtain whatever he wanted, and could command the services of others. He quite forgot that gold was only of use while it could command something else, and that if that something else were changed into gold, his gold would be of no use whatever. Gold, therefore, was only of use because of the multitude of things which were *not* gold.

11. The very same ideas gradually grew up in Europe. Sovereigns saw that their chief power consisted in the treasures they could accumulate. It then became a cardinal point of their policy to encourage the importation of money as much as

possible, and to prohibit its export. From about the beginning of the 14th century, the laws of nearly every country in Europe endeavoured to prevent the export of money. Statesmen and merchants were all infected with this delusion, which was greatly fostered by the discovery of the New World. The Spaniards, dazzled with the brilliant prospect of securing the greatest part of the wealth in the world without labour, imagined that the well-being of the country consisted in amassing enormous heaps of gold and silver. But they wholly mistook the means for the end, not discerning that the precious metals are only precious so long as they are used for setting industry in motion, while they encourage the tilling of the land, the mother of increase, or the building of ships to promote the commerce of nations, or plying the loom to produce clothing for mankind.

It would be beyond the scope of this work to dwell upon their well-known policy, and its fatal results. While the precious metals poured into the country in boundless quantities, which the statesmen of the day thought would make them the rulers of the world, it began immediately to decline. Its industry was paralysed, and the most sanguinary penalties were unable to prevent their much coveted treasures flying from the country; till at last it was reduced to the lowest depth of poverty, weakness, dishonesty, and contempt. Next to Poland, Spain became the weakest and poorest country in Europe. Scarcely ever has the world seen a country blessed with so many resources by nature, so suddenly descend from so lofty an eminence to such a pitch of degradation: and it was emphatically wicked and unjust laws regarding religion, and erroneous ideas regarding the value of gold and silver that did it all. Spain fairly earned the eminence she attained to by her industry and energy, and nothing can be more instructive to shew how a great state may be ruined by evil legislation on such subjects—to shew how to reverse the boast of Themistocles—than a plain and simple history of the terrible catastrophe of Spanish grandeur. The legislation of this country was for a considerable period tainted with similar errors, though in a milder form, and they produced consequences the same in kind, but less in degree, owing to the innate energy and indomitable industry of the people, who at last discovered their mischief, and burst their fetters.

On the Doctrine of the Balance of Trade.

12. The doctrine of the Balance of Trade exercised such a powerful influence over legislation and national fortunes for two centuries, and as its overthrow, together with the catastrophe of Law's System of Paper money, or the Mississippi Scheme, were the causes out of which the science of Political Economy originated in modern times, we must explain the phrase.

The expression Balance of Trade is a pregnant example of Bacon's aphorism, that the fallacies of language are the most troublesome of all, and of the extreme difficulty of eradicating those with some portion of truth in them. It is also a conclusive reply to those persons who think that attention to the meaning of words is of no consequence in Economics.

As this error, however extensively it prevailed in its own time, and however fatal its consequences were, is now completely exploded, we do not care to decide where it arose. England, France, and Italy, all contend for the honor of the cap and bells; nor is it worth while to settle the priority of folly. Though Spain may probably be really entitled to it. In the conquest of the New World, gold was the chief object of their ambition, and their new acquisitions were estimated chiefly as they were capable of producing the precious metals. The object of all trade was to acquire the precious metals, and the profits of commerce were estimated just as they brought in gold and silver.

As gold and silver only were reckoned as wealth, and other commodities as nothing, the idea very naturally grew up that what *one side gained the other must lose.* Montaigne was one of the first to formulate this unfortunate doctrine.

Having thus adopted the opinion that gold and silver were the only species of wealth, and that what one side gained the other lost, they then began to estimate how much the gain or the loss was, and they did it in this way. They said that if the exports of a country exceeded the imports in *value*, that the *balance* must be received in money, and that if the imports exceeded the exports in value, the balance must be paid in money. The difference in value between the exports and the imports was called the *Balance of Trade*, which it was assumed

must be paid in money, and the trade of a country was considered favorable or adverse according as the balance was for or against it. That is to say, the profit was held to consist in the quantity by which the value of the exports exceeded the value of the imports, and the loss was held to consist in the quantity by which the value of the imports exceeded the value of the exports.

13. Now let us take a very simple example of the rudest description of trading, which will illustrate the point as well as the most elaborate.

When our ships first traded to the South Sea Islands, they took out with them axes, beads and other trifles which were of very little value in this country, and bartered them for all sorts of curiosities, shells, &c., which were very valuable in England. A pair of fine shells from the South Seas in many cases is worth ten guineas in England, which perhaps an English sailor obtained in exchange for an axe which cost 2/6. The English sailors thought the natives very simple to give away so many valuable curiosities for such common things. We cannot doubt that the natives had exactly the same opinion of the English sailors; they thought them great simpletons to give away such valuable things as axes, beads, &c., for so common things as a few shells. Each party, however, exchanged what was common and cheap in his own country for what was scarce and valuable. The axes were many times more valuable in Feejee than the shells; the shells were many times more valuable than the axes in London. Thus an English sailor by giving away perhaps 2/6 gained in exchange what was worth ten guineas, and the difference was his profit. And thus both parties gained by the commerce. The shells were worth many axes in London; the axes were worth many shells in Feejee; and this is the genuine spirit of commerce. This simple transaction is a type of all commerce. The value of the shells in London arises from the desire of the people in London to possess them, and their scarcity. The value of the axe in Feejee arises from the great desire of the Feejeeans to possess it, and the scarcity of axes there. The coloured beads were just as valuable to the poor untutored savages as diamonds are to civilized Europeans. The commerce of all nations is exactly similar in principle to that between the sailors and the savages. It all consists in exchanging

things which are comparatively cheap and common in two countries for what is dear and scarce in them reciprocally, and of course both parties must gain by the very nature of the transaction. But according to the old doctrine of the Balance of Trade England having given an axe worth 2/6, and having received a pair of shells worth ten guineas, still owed the balance which required to be paid in gold!

14. We observe from this simple example that the profit is measured by the excess of the value of the import above that of the export, as the import is the payment for the export. And as all the expenses of conveying the export to the foreign country, and of bringing the import from the foreign country must come out of this difference, and, as there must in addition to that be the merchant's profit, it must be a dead loss unless the value of the import very considerably exceeds the value of the export.

The supporters of the Mercantile System quite overlooked the fact that the imports were in general the payment for the exports, and therefore profits were greater by just so much as the value of the import exceeded that of the export.

15. We have observed also that both sides gained in this commerce, because a shell was worth many axes in England, and an axe was worth many shells in Feejee. But it is evident that this process would not go on indefinitely, because if too many shells were imported into England, their value would diminish so much, that it would cease to defray the cost of the trade. So if too many axes were imported into Feejee, their value would fall so as not to be able to buy shells enough to defray the cost of the traffic, and then of course the commerce would cease.

As a general rule therefore, both sides must gain in commerce. For why should any one voluntarily make an exchange to his own loss? No doubt there may be individual cases where traders are unfortunate and make losses. But as a general rule while commerce goes on, the necessary inference clearly is that it is mutually profitable, and directly profit ceases, commerce must cease.

16. Nevertheless the merchants and statesmen of that time, having laid down that gold and silver were the only species of wealth, held that that side only which received a payment

in money gained, and the other side lost. Whereas it was quite clear, unless the sum received exceeded a certain amount, the trade must be a loss, just as unless a tradesman receives a certain amount in money for his goods he must lose. They also held that the profit was estimated by the excess of the value of the export above that of the import; whereas it is clear that the real truth was the exact reverse of the doctrine of the Balance of Trade.

For more than two hundred years, this extraordinary delusion kept possession of the minds of nations, and all commerce between them was reduced to a general scramble to obtain possession of the greatest amount possible of the gold and silver in circulation. Every effort was made by war and legislation to obtain money, and nothing but money. Everything was sacrificed to endeavour to force foreign trade. Exportation was encouraged in every way, and importation discouraged and prevented. Each nation was supposed to be benefited by and interested in the destruction of its neighbours. Montaigne and Bacon repeated the doctrine that the gain of one must be the loss of another. Even Voltaire repeated this fatal dogma.

J. B. Say says that in the space of two hundred years during which Statesmen were blinded with this strong delusion, no less than fifty years were spent in commercial wars, arising directly out of this stupendous folly. Fifty years of war with all its horrors waged for a chimera—a fiction—a thing which had absolutely no existence at all. Do we not say that true views in Economics are of the utmost importance to mankind. True Economics turned the light of science on a *single* expression, and the result has been to destroy for ever a fallacy which let loose upon the earth the demon of war for fifty years!

17. As this system is now absolutely exploded, it would occupy too much space in this work to describe fully its fatal effects. The first eight chapters of the Fourth book of Smith's Wealth of Nations contain the most elaborate exposition of it in the English language, and we must refer those who care to inquire further into it to that work.

18. It is true that during this period a few sagacious men perceived the gross fallacy of the whole system, but they were solitary lights shining in darkness, and the darkness comprehended them not. Their isolated efforts were unheeded and

forgotten, and it was not until a powerful sect arose that any permanent effect was produced upon the opinions of mankind. And that honour is unquestionably due to Quesnay and his followers. These men first proclaimed the doctrine that every nation is interested in the prosperity of its neighbours, and not in their destruction, with a power and an authority, which has gone on increasing from their day to this, and having been developed by a long series of illustrious writers, has produced an entire revolution in the opinions of mankind, and in the policy of the most enlightened nations.

Section II. Rise of the First School of Modern Economists in France, called the Physiocrates.

Quesnay—Turgot—Dupont de Nemours—Le Trosne—Mercier de la Rivière.

19. Cicero, among other Philosophers, had seen that the Law which should govern all States is not arbitrary, but founded in human nature itself. The Supreme Being has created man prescient, sagacious, complex, possessed of memory, full of reason and counsel, and endowed him with a capacity for the noblest enterprises, for association, and for the reciprocation of mutual benefits. Man alone is endowed with the divine reason, the common property of God and Man, and, therefore, there is an original rational community between them. Since right reason is what we call Law, God and Man must be considered as associated by Law; where there is a communion of Right there must be communion of Law.

This right reason is that supreme law which has existed from all ages, before any written laws were made, or any states were founded. So that of all the questions discussed by men, none is more important than to understand that Law was not established by opinion, but by nature, who made us just, that we might supply each others' wants. Law is nothing but right reason enjoining what is good and forbidding what is evil. There is one essential justice which binds society together, which most conduces to the preservation of states, the security, the peace, and the happiness of the people. It is the just distinction between right and wrong, made conformable to the most ancient nature of all, the original and principal regulator of all things. It does not begin for the first time to be Law when drawn up in writing. But the existence of moral obligation is co-eternal with the Divine Mind, and is capable of being discovered by human reason.

True Law is right reason conformable to nature, universal, unchangeable, eternal, whose commands urge us to duty, and restrain us from evil. This can neither be repealed nor modified by any human law, nor can any human authority dispense with an obligation to obey this eternal law, which needs no

other exposition or interpreter than ourselves. Nor is it one thing at Rome, and another at Athens: one thing to-day, and another to-morrow: but in all times and nations this universal law must for ever reign eternal and imperishable. God himself is its author, its promulgator, its enforcer. By carefully observing it States alone can flourish; by violating and neglecting it States perish[1].

20. Although, as we have said above, there were several very good works on particular points in the science now called Political Economy, or Economics, and several persons had advocated freedom of trade, it may be said that it only assumed the rank and the form of a science in the middle of the last century in France. That country had been brought to the lowest state of depression and misery by the ruinous wars of Louis XIV., the financial catastrophe of the Mississippi scheme, the destructive effects of the prevailing mercantile system, the oppression of the nobility, and the weight of the taxes. The terrible picture of social tyranny, cruelty, and oppression which the French people groaned under during the first half of the eighteenth century may be seen in contemporary writers.

Reflecting on this intolerable misery, a few generous and righteous philosophers struck out the idea that there must be some great natural science, some principles of eternal truth, founded in nature itself, with regard to the social relations of mankind, the violations of which were the causes of that hideous misery they saw in their native land. The name they gave this science was *Natural Right*, and their object was to discover and lay down an abstract science of the natural rights of men in all their social relations. And this science comprehended their relations towards the government, towards each other, and towards *property*. The term *politique* in French might in a certain way have expressed this science, but that word was so exclusively appropriated to the art of government that they adopted the name of Political Economy for it, and hence they were commonly called the ECONOMISTS. One of their number proposed the name of PHYSIOCRATIE, or the government of the nature of things, and hence they were often also called PHYSIOCRATES; but the word having been appropriated to certain doctrines of the sect, which are now shown

[1] *Cicero, De Legibus, passim, and De Republicâ.*

to be erroneous, has fallen into disuse, and the term Political Economy, or Economics, has survived.

21. FRANÇOIS QUESNAY, the great Father of this science, was born on the 4th of June 1694, the son of an advocate, who owned a small property at Merey, about 10 leagues from Paris. Although a man of a liberal and enlightened mind he seems to have strangely neglected the education of his son, who was brought up and worked on his father's farm, and was not even taught to read. But his innate love of knowledge led him not only to learn to read, but to study Latin and Greek. Ambitious of a higher career than a peasant proprietor, he adopted surgery as a profession, and settled at Mantes, the county town of his native province. A series of fortunate accidents brought him into connection with persons of high rank, who persuaded him to move to Paris. He there published a number of professional works which were held in the highest esteem, and was ultimately appointed physician in ordinary to Louis XV. The king held him in the highest esteem, and ennobled him, giving him as his arms three pansies, or *fleurs de pensée* in French, with the motto *propter cogitationem mentis*, and used to call him *le penseur*. He assigned him apartments in the Palace at Versailles, in which the meetings of his friends were held, who were known by the name of the Economists: and Quesnay's works were printed at the press of the Palace. Quesnay died in December 1774, of an attack of gout, having survived by three months the appointment of his most illustrious friend and disciple Turgot, as Prime Minister of France, and having just witnessed the first-fruits of the triumph of his doctrines, by the establishment of the complete freedom of the trade in corn in France, both internal and external.

Outline of the Physiocrate Doctrine of Natural Order.

22. The Creator has placed man upon the earth with the evident intention that the race should prosper, and there are certain physical and moral laws which conduce in the highest degree to ensure his preservation, increase, well being, and improvement. The correlation between these physical and moral laws is so close that if either be misunderstood, through ignorance or passion, the others are so also. Physical nature, or matter, bears to mankind very much the relation which the

body does to the soul. Hence the perpetual and necessary reaction of physical and moral good and evil on each other.

Natural justice is the conformity of human laws and actions to natural order: and this collection of physical and moral laws existed before any positive institutions among men. And while their observance produces the highest degree of prosperity and well being among men, the non-observance or transgression of them is the cause of the extensive physical evils which afflict mankind.

If such a Natural Law exists, our intelligence is capable of discovering it. For if not, it would be useless, and the sagacity of the Creator would be at fault. As, therefore, these laws are instituted by the Supreme Being, all men and all states ought to be governed by them. They are immutable and irrefragable, and the best possible laws: therefore necessarily the basis of the most perfect government, and the fundamental rule of all positive laws, which are only for the purpose of upholding Natural Order, evidently the most advantageous for the human race.

The evident object of the Creator being the preservation, the increase, the well-being, and the improvement of the race, man necessarily received from his origin not only intelligence, but instincts conformable to that end. Every one feels himself endowed with the triple instincts of well-being, sociability, and justice. He understands that the isolation of the brute is not suitable to his double nature, and that his physical and moral wants urge him to live in the society of his equals, in a state of peace, goodwill, and concord.

He also recognizes that other men, having the same wants as himself, cannot have less rights than himself, and therefore he is bound to respect this right, so that other men may observe a similar obligation towards him.

These ideas, the products of reason, the necessity of work, the necessity of society, and the necessity of justice, imply three others Liberty, Property, and Authority, which are the three essential terms of all Social Order.

How could man understand the necessity of labour to obey the irresistible instinct of his preservation and well being, without conceiving at the same time that the instrument of labour, the physical and intellectual qualities with which he is

endowed by nature, belongs to him exclusively, without perceiving that he is master, and the absolute proprietor of his person—that he is born and should remain free?

But the idea of liberty cannot spring up in the mind without associating with it that of property, in the absence of which the first would only represent an illusory right, without an object. The freedom the individual has of acquiring useful things by labour, supposes necessarily that of preserving them, of enjoying them, and of disposing them without reserve, and also of bequeathing them to his family, who prolong his existence indefinitely. Thus liberty, conceived in this manner, becomes property, which may be conceived in two aspects as it regards moveable goods, or the earth, which is the source from which labour ought to draw them.

At first property was principally moveable. But when the cultivation of the earth was necessary for the preservation, increase, and improvement of the race, individual appropriation of the soil became necessary, because no other system is so proper to draw from the earth all the mass of utilities it can produce; and secondly, because the collective constitution of property would have produced many inconveniences as to the sharing of the fruits, which would not arise from the division of the land, by which the rights of each are fixed in a clear and definite manner.

The law of nature which permits every one to do what is most advantageous for himself, on the sole condition of not injuring any one else, was not violated by the first cultivator enclosing, labouring, sowing, and incorporating his labour with the soil, so that a portion of his moveable wealth, so to say, increased its value in a manner almost fabulous. This act was eminently just, because it was useful to himself and to the whole society. This did not diminish the natural right of man to labour to live, but, on the contrary, made it less precarious, much more certain and profitable. Without the prodigious increase of subsistence by agriculture, from which came gradually the difference of professions, and the division of labour, it would be impossible to arrive at the providential development of the human mind in the triple domain of industry, art, and science. Property in land, therefore, is the necessary and legitimate consequence of personal and moveable property.

Every man, then, has centred in him by the Laws of Providence certain Rights and Duties: the right of enjoying himself to the utmost of his capacity, and the duty of respecting similar rights in others. The perfect respect and protection of reciprocal rights and duties conduces to production in the highest degree, and the obtaining the greatest amount of physical enjoyments.

The Physiocrates, then, placed absolute freedom, or property, as the fundamental right of man,—freedom of Person,—freedom of Opinion—and freedom of Contract, or Exchange; and the violation of these as contrary to the Law of Providence, and therefore the cause of all evil to man. Quesnay's first publication, *Le Droit Naturel*, contains a general inquiry into these natural rights; and he afterwards, in another, called "*Maximes générales du Gouvernment économique d'un Royaume agricole*," endeavoured to lay down, in a series of thirty maxims or fundamental general principles, the whole basis of the Economy of Society. The 23rd of these declares that a nation suffers no loss by trading with foreigners. The 24th declares the fallacy of the doctrine of the Balance of Trade. The 25th says, "Qu'on maintienne l'entière liberté de commerce; car la police du commerce interieur et exterieur la plus sure, la plus exacte, la plus profitable à la nation et à l'état consiste dans la pleine liberté de la concurrence." In these three maxims were contained the entire overthrow of the existing system of Political Economy, which Quesnay and his followers developed, and, notwithstanding certain errors and shortcomings mentioned below, they are unquestionably entitled to be considered as the founders of the science of Political Economy.

23. We shall now endeavour to give an outline of the Physiocrate system, reserving a more particular examination of separate doctrines for a future chapter.

In the Mercantile System, gold and silver only were held to be wealth: and the wealth of a country was estimated by the quantity of gold and silver it could accumulate.

The Physiocrates held that man could only preserve himself on the earth by obtaining from it those useful and agreeable objects which preserve us from pain and death. These useful and agreeable products were called *biens*, goods, and are all

composed of natural products. So long as persons or tribes lived in a state of isolation, and themselves consumed the things they produced, these products were called simply *biens*.

A man living by himself would live on his produce, and would estimate various things only by their use to him. He would regulate the extent of his culture by his consumption, and he would not work to produce anything useless to him.

But when men came to live in society, they would find that they had numerous wants, which they could not satisfy by means of their own products directly. And as this is the case with all men, they would find it advantageous to exchange some of their own products, which were in excess of their own wants, for the products of others which they require. When these *biens*, or products then, and when only, are exchanged they become WEALTH. The Physiocrates unanimously held that the quality of wealth sprung out of an Exchange.

The Physiocrates exclusively restricted the term WEALTH to the products of the earth, which were brought into commerce, or *exchanged*. Thus they held the principle of Wealth to reside exclusively in *exchangeability*. They then laid it down as a fundamental principle that all Wealth comes from the earth.

The earth only gives products which have the physical qualities necessary to satisfy our wants. But in society they acquire a new quality which springs from the communication of men with each other: this is exchange, which attributes VALUE to them. This Value is a quality only relative and accidental, not absolute and inherent in them. It is, therefore, only commerce which causes Value: and value is the relation which exists between two products which are exchanged.

The Physiocrates divided labour into PRODUCTIVE, and STERILE or UNPRODUCTIVE. They defined Productive labour to be only that employed in obtaining the rude products from the earth; or that employed in increasing the quantity of rude produce. This labour extended over three kingdoms, the animal, vegetable, and mineral, and under it were included all agriculturists, hunters, miners, quarriers, fishers, wood-cutters, &c.

They called this kind of Labour productive, because they alleged that it was the only labour which added to the Wealth of the Nation, or the quantity of products. They maintained

that this was the only kind of labour which left a surplus after defraying its own cost. The excess of the natural products obtained every year from the earth, above the quantity of them required to defray the cost of obtaining them, was called the *Produit Net*, and they alleged that all other classes of society are maintained out of it, and its Value was the sole Revenue, or annual income, of the State, and the sole increase of national wealth.

But this rude produce is scarcely ever in a fit state, or in a fit position, to be used by men. It has to be fashioned, and manufactured, and transported from place to place, and perhaps sold and resold more than once, before it is ultimately used.

All this intermediate labour employed between the original producer and the ultimate buyer, the Physiocrates denominated as STERILE, or UNPRODUCTIVE, and classed under DISTRIBUTION.

All products obtained from the earth were destined for human use. The person who used them was called the CONSUMER. But as the Science dealt only with products which were brought into commerce, all who used what they themselves produced were excluded from consideration. Therefore the Consumer was the final purchaser, and the Physiocrates called him the *Acheteur Consommateur*.

Hence the Consumer was the person for whose benefit all the preceding operations took place. Production was only for the sake of consumption, and consumption was the measure of reproduction, because products which remain without consumption degenerate into superfluities without value.

The complete passage of a product from the original producer through all the intermediate stages to the consumer, the Physiocrates designated as COMMERCE, or an EXCHANGE. And as originally any man who wished to *consume*, or enjoy, any product, must have some product of his own to give to purchase it, he also was a producer in his turn. Hence, in an Exchange, things are consumed on each side. An exchange has only two essential terms a Producer and a Consumer. These are the only two sorts of men necessary to Commerce, the first seller and the last buyer-consumer; and they often exchange directly between themselves without any intermediate agents.

All intermediate persons who transported the product from place to place, or sold and resold it, the Physiocrates termed

traffickers. All these operations are only in themselves an intermediate movement between the place of Production and that of Consumption—between the first seller and the last buyer-consumer. The Physiocrates said that they are only a cost to commerce, and not a profit to the nation: and that all their gains come out of the profits of the producer and the consumer.

24. Hence we see that in Physiocrate language, WEALTH meant that portion of the raw produce of the earth which is brought into commerce.

PRODUCTION meant obtaining that raw produce from the earth, and bringing it into commerce.

DISTRIBUTION meant all the operations it went through to bring it to the place where it is to be ultimately purchased for use.

CONSUMPTION meant ultimately purchasing and taking the finished product out of commerce, for the purpose of use or enjoyment.

The whole passage of the product from its first producer, or seller, through the various stages of distribution till its ultimate consumption, or purchase, was called COMMERCE, or EXCHANGE.

Hence the Science of the Production, Distribution, and Consumption of Wealth, meant simply the science of COMMERCE or EXCHANGES.

25. One of the most important services rendered by the Physiocrates to Economics, was their re-establishment of the true doctrine of the nature and use of money.

The mercantile system held that money is the only species of wealth; the evident absurdity of this doctrine was so great, that it naturally led to a reaction, and as usual in such cases opinion went to the opposite extreme. It was held that Money is not Wealth at all, but only the *sign* or *representative* of wealth.

This naturally led to the doctrine that as money is only the means of obtaining other things, it is wholly indifferent what it is made of, and that it is only the command of the sovereign which gives it value. It was alleged that the sovereign might

diminish the quantity of metal as much as he pleased, and still continue to affix any value he pleased to it. The extraordinary consequences that resulted from this doctrine are set forth in the chapter on Coinage. John Law maintained that there is no reason why silver alone should be considered as money, and that the value of the land and all moveable goods might be coined into money by means of paper notes as well as silver, which would maintain an equality of value with silver. The attempt to realize this idea produced the catastrophe of the Mississippi scheme, and the terrible reality of facts shattered his theory to atoms. Law's theory of money was set forth by the Abbé Terrasson, an able member of the Academy of Inscriptions, and the study of these doctrines led Turgot, then a young man of 22, to investigate the nature and use of money.

Turgot and the Physiocrates shewed that money is neither all-wealth, nor is it not-wealth, but that it is simply a species of merchandize, which is used for a particular purpose to facilitate commerce. It is found more convenient in commerce, instead of exchanging products directly for one another, to exchange them for some intermediate merchandize which is itself universally exchangeable. Such an operation is termed a SALE. Any merchandize whatever might have been chosen for this purpose, but there are many reasons why gold and silver are superior to all other species. The merchandize which is used for this purpose is called *Money*. But this kind of exchange in no way differs from any other, and the money given in exchange is the equivalent of the merchandize. Thus, though every one agrees to take money in exchange for products, it is not the *sign* or *representative* of products, but their *equivalent*. Money therefore is nothing but one species of merchandize, and any merchandize may be made money. Hence, though money has uses of its own, yet its value, or exchangeable power, depends on exactly the same laws as the value of any other merchandize. Money therefore is wealth in itself, but only a very small part of the general wealth.

As every one is willing to exchange his products for money, money may be considered as a general Order, or Bill of Exchange on all the products of the country, and as its only use is to facilitate exchanges of products, a substitute may be found for it. The Physiocrates shewed that instead of the quantity

of money in a country being the measure of its wealth, it is generally the contrary. In rich countries the valuable paper of rich merchants supplies the place of money, and is itself an object of commerce just like money. It is only in poor and barbarous countries, where no one has confidence in his neighbour, that a large stock of money is required. The use of more money than is absolutely required is a great loss to a country, because it can only be purchased with an equivalent amount of products, and their value is thus withdrawn from being employed in productive operations. Any country which has plenty of products can at any time purchase any amount of money it may require. The Physiocrates, therefore, strongly urged the entire abolition of all restrictions on the free export of money, and also the entire abolition of usury laws. The Physiocrate doctrine of the nature and use of money is exactly that which is developed in this work, so we need say no more about it here.

26. We now come to the most remarkable and distinctive portion of the Physiocrate doctrine.

They applied the term *productive* labour exclusively to that employed in obtaining raw produce of all sorts from the earth. All other labour expended on the raw produce, either in fashioning it, manufacturing it, or transporting it, they called *sterile* or *unproductive*, because they alleged it adds nothing to the wealth of the country; and they maintained that neither the labour of artisans nor the operations of commerce tend to enrich the country.

In the first place they said commerce cannot *enrich* a country, because it is only an exchange of value for equal value. Over and over again the Physiocrates repeat that commerce being only an exchange of equal values, neither side can gain or lose. They held that the only use of commerce is to vary and multiply the means of enjoyment, but that it does not *add* to national wealth; or, if it does, it is only by giving a value to the products of the earth, which might otherwise fail in finding a market. They contend also that as all exchanges are merely equal value for equal value, the same principles also apply to sales, and that therefore the gains that traders make are no increase of wealth to the nation.

They then said that the labour of artisans in manufactures is sterile or unproductive, because, though their labour adds to the value of the product, yet during the process of the manufacture the labourer consumes his subsistence, and the value added to the product only represents the value of the subsistence destroyed during the labour. Hence in this case there is an addition to value, but no production of wealth.

These are the doctrines which the Physiocrates maintained with long and repeated arguments which it would be tedious and useless to give at any length, because they were mere repetitions. But how men of the ability of the Physiocrates could maintain that a country can be enriched neither by labour or commerce, with the examples of Tyre, Carthage, Venice, Florence, Holland, and England before them is incomprehensible. With such patent glaring *facts* before them, it is surprising that they were not led to suspect the truth of their reasoning. It is one of those aberrations of the human intellect which we can only wonder at, but not explain.

With such views, they held that the internal commerce of the country conduces nothing to its wealth; and the foreign commerce very little. They called foreign commerce only a *pis-aller*. One truth, however, they perceived. They saw that money is the most unprofitable merchandize of any to import, and that merchants never import money when they can import products. Therefore they called the import of money in foreign commerce only the *pis-aller* of a *pis-aller*.

The Physiocrates held that all the costs of trafficking come out of the profits of the producers and consumers, and though gains to them, are not profit to the nation, and said that the state ought not to tax them.

They maintained that the value of the Produit Net is the only real increase of wealth to the nation, and that all taxation should come out of it directly.

27. The preceding remarks contain, we hope, a sufficient outline of the Physiocrate doctrine. We have now to point out in what it was defective.

In the first place it was deficient in *generalization*. It placed the principle of wealth exclusively in exchangeability, but confined that to the material products of the earth, which were all that were necessary to man's subsistence. A product that was

useful or agreeable and exchangeable they defined to be wealth, and those who obtained such products they termed producers. That is, they only admitted those things to be wealth which benefited the body. But man has mental wants as well as physical wants. He does not live by bread alone. His mind has necessities and enjoyments as well as the body, and there are persons who are capable of producing things useful and agreeable for the mind, which are exchangeable, and valuable, as well as those for the body. And, therefore, such things should have been included under the title of Wealth, as we have seen was done by the author of the Eryxias in ancient times.

The fundamental doctrine of the Physiocrates that products of the earth are always ultimately exchanged against other products of the earth is also manifestly erroneous. The producer of a material product does not always require a material product in exchange; he may want instruction or education, or the services of a lawyer, or a physician, or mere enjoyment. Hence a material product is often exchanged against a mere service. When Goldsmith wandered about Europe, depending solely on his flute to procure him food and lodging, this was as real an exchange as that of a material product. Turgot was sensible of this, and he said that all exchanges are between products and services. Le Trosne was in error when he said that only material products are in commerce. Now these services are valued in money or products, just in the same way that any material products are, and therefore the Physiocrates should have seen that they are entitled to be classed as WEALTH.

But these are not the only species of articles in commerce. Quesnay observed that money is supplemented by credit; he said that valuable paper supplies all the purposes of ready money; that they are received in exchange, and are made a commerce of just like money itself.

Hence, although that stupendous system of Credit and Banking which has attained such gigantic proportions in modern times, did not prevail then, yet there was quite enough of Credit in existence to attract the notice of the Economists to the fact that it is a subject of commerce itself, and that there are not only one or two, but *three* species of articles in commerce.

The fact was that having begun by directing their attention

solely to material products, they too hastily laid down that all wealth comes from the earth, whereas they might have seen that all exchangeable, or valuable, things do not come from the earth.

An uneasy feeling of this nature seems to have troubled at least one of the most distinguished Physiocrates, Le Trosne, who endeavours to point out why personal services are not wealth. He says that personal services are only relative to the person; they are not transmissible, or inheritable, or transferable; they do not result in a product which can be transferred, and whose value can be determined by competition; whereas, products being useful, generally have a value in themselves, and acquire one by industry which may be re-sold.

But the answer to this is clear. Personal services, or labour, have a value which is determined by competition, like any other value, and if they can be exchanged *once*, that is quite sufficient. A baker bakes a bun, and a customer comes in and buys, and eats it. It is destroyed, and cannot be re-sold, it was only exchanged once. But had it no value? and was it not wealth? Suppose a person does a service and is paid a pound for it: and a baker sells bread to the amount of a pound, is not the service equal in value to the bread? what does it matter to either of these persons how soon their product is destroyed, so long as they are paid for it?

28. Le Trosne is equally unsuccessful in his endeavour to exclude Credit from the title of Wealth.

He admits that the quality of Wealth depends purely on exchangeability. But he distinguishes between money which has *intrinsic* value, and bills which have only value from the presumed solvency of the debtor.

Le Trosne himself says that value is not a quality absolute, and inherent in things, but proceeds entirely from exchangeability. Hence to speak of money having *intrinsic* value is evidently a contradiction in terms. Money has no value except that people agree to give something in exchange for it: and if it were placed among people who would give nothing for it, it would have no value. A bill has value for precisely the same reason that money has, namely, that the debtor is bound to give money for it at a certain time. It is true, if the debtor fails, the bill will lose its value; but that is just what happens to money

if placed where it cannot be exchanged. Hence both the money and the bill have value for precisely the same reason, and lose their value under the same circumstances. Hence it is clear that the value of money is only more *general* than that of a Bill. It is only a difference in degree, but not in kind.

Now it is not, perhaps, to be wondered at that Quesnay, who was a physician, should not have seen clearly the nature of Credit. But Le Trosne was an advocate: he must have studied Roman Law. He must have known that Property is divided in Law, into Corporeal and Incorporeal, and he must have known that Rights, or Incorporeal Property, are expressly included under the term "*Pecunia*" or "Wealth" in Roman Law, and indeed in every system of Law, and, therefore, we may well be surprised at his feeling any difficulty about Credit being Wealth.

In fact the Physiocrates fell into exactly the same error with regard to Credit, as they had delivered the world from with respect to money. In the reaction against the Mercantile System it was said that money is only a sign, or representative, of wealth. The Physiocrates shewed that money is not a sign, or representative, of wealth, but an actual species of wealth, or merchandize, itself.

But they saw that though a species of wealth itself, its only use is to be exchanged for other things; hence they repeatedly called it an Order, or Bill of Exchange, or a Title to be paid in goods.

Now Le Trosne says that Credit is not Wealth, but only a title to be paid in Wealth.

It is somewhat remarkable that it escaped the sagacity of the Physiocrates, that if money be an Order, or Title, or Bill of Exchange, it follows that a Bill of Exchange or other form of Credit, must be a species of money. For credit clearly bears the same relation to money that money does to goods. And as money is not a *sign* or *representative* of goods, so neither is credit the *sign* or *representative* of money, but is an article of separate independent value, and forms the subject of the most gigantic commerce in modern times.

29. The Physiocrate doctrine that Productive labour is only that which is employed in obtaining the produce of the earth, was not mere logomachy. They based their whole theory of taxation on it; they maintained that all taxation should be

laid directly on the *Produit net* of land, and that all other classes of persons ought to be exempt. We must reserve any examination of this theory till the chapter on taxation. But we may simply say that, as they maintained that all commercial profits are made at the expense of the State, and opposed to the interests of the State, it seems very strange to hold that all these profits should be exempted from contributing to the wants of the State. And farther, as they held that all these profits are obtained at the expense of the original producer, it seems very strange to say that all taxation should be laid on him, and all those who make profits at his expense should go free.

30. The Physiocrates have the immortal glory of having established absolute freedom of trade in every particular, on a great moral basis, as the fundamental right of mankind, proved to be true equally by abstract reasoning and practical experience. And they only missed the glory of seeing it finally established as national policy, by the French Revolution. In 1774, Turgot, the most illustrious of the friends of Quesnay, was appointed Prime Minister of France, and had the satisfaction of abolishing all restrictions on the internal commerce, and the exportation of corn; and thus was able to gladden the heart of his dying master, by seeing the first-fruits of his philosophy. And although this great man was driven from power by the selfish aristocracy, whom he would have saved from the catastrophe that was impending over them, Free Trade doctrines had made such progress that in 1786, Mr. Pitt and the French Government concluded a treaty of Commerce and Navigation, by which all impediments to the free intercourse between the nations were abolished, and the "reciprocal and entirely perfect liberty of navigation and commerce between the subjects of each party in all and every the kingdoms, states, provinces, and territories, subject to their Majesties in Europe for all and singular kind of goods in these places" was established on the payment of moderate duties.

But the deluge of the French Revolution swept away this beneficent work, and re-plunged the nations into Economic darkness, from which England only began to emerge in 1822, and the glory of finally assuring the triumph of Free Trade doctrines accrued to the disciples of the second school of Economists by the repeal of the Corn Laws in 1846.

31. It is sometimes urged that the Physiocrates made the science of Political Economy too dogmatic, or *à priori*. But this censure must be taken with a qualification. If we knew *all* the true principles of all things, then science would be entirely *à priori*. As Bacon long ago pointed out, the very perfection of science is to attain the *à priori* state: and the more true principles are discovered, the more it approaches the *à priori* state. Now the Physiocrates, contemplating the position of man on the earth, and the evident intention of the Creator, arrived at the principle *inductively* that Freedom of Person, Opinion, and Contract, or Exchange, are the fundamental rights of mankind, most conducive to human happiness, increase, and improvement, and that all violations of them are injurious to the human race.

Adopting, then, these fundamental principles, they found a state of society existing, altogether violating these rights, and, therefore, afflicted with innumerable evils. And has not history amply vindicated their doctrines? For what have brought the greatest evils on men? Slavery, Religious Persecution, and Commercial Restrictions. During the last 1800 years, what have been the causes of the greatest number of wars? History answers—Religion and Commerce. If the doctrines proclaimed by the Physiocrates had always been held to be true, as they now are by all enlightened persons, nine-tenths of the wars which have desolated the earth during the last eighteen centuries, would never have occurred.

32. The great speculators of the middle ages held the material world in low esteem, as unworthy of the attention of philosophers. But it is the glory of the Baconian Philosophy to have extended the dominion of mind over matter, and brought into subjection, and turned to profit the forces of nature. The philosophers who proclaimed that Law is of Divine institution, and that there is a system of law, which is innately right, anterior to all human laws, confined their ideas to moral rights. But it is the glory of the Quesnayan, or Economical Philosophy, to have shewn that there is a great moral relation existing, not only among men, but connecting man with the material world, most intimately connected with the well being of the human race, which is capable of being discovered and established by human reason, as well as any of the other sciences, which are rightly considered as the

triumphs of the human intellect. Thus Bacon extended the dominion of mind over matter, and Quesnay ascertained the rights of man relating to matter.

33. The Philosophy of the Economists differs from all others in taking the individual man as the basis of society. Almost all other systems hold the individual as subordinate to society, and it is certain that individual property is not that which originally prevailed throughout the world. But instead of sacrificing man to society, the Economists declared that society is only instituted for the purpose of preserving and defending the rights of the individual. "Governments," says Turgot, "are apt to immolate the well being of individuals to the pretended right of society. They forget that society is only made for individuals, and that it was only instituted to protect the right of all in insuring the performance of mutual duties."

How much in advance of their age the Physiocrates were, can only be appreciated by those who will take the pains to acquire a knowledge of the state of society and opinion, when they lived. It is manifestly quite impossible to give any adequate picture of that in the limits of this work. It is sufficient to say that they were the leaders of mankind in that great change or movement, as it has been called, of society from *Status to Contract*, and their principles are constantly gaining influence throughout the world. Therefore, although certain portions of their doctrines may be erroneous, and have been set aside by subsequent Economists, they are entitled to imperishable glory in the history of mankind.

Section III. The Second School of Economists.

Adam Smith—Ricardo—J. B. Say—J. S. Mill.

34. The Physiocrates had placed the doctrines of Free Trade on an impregnable basis, but the distinctive doctrines of their school, that neither labour nor commerce are productive of wealth, or can enrich a nation, and that in commerce neither side gains nor loses, were so manifestly contrary to the plainest experience of facts, that it was inevitable that they should be speedily overthrown.

Accordingly in the same year, 1776, two writers, Adam Smith, in Scotland, and Condillac, the well-known metaphysician, in France, who were the friends and associates of the Economists, and emanated from their school, published works independently of each other, demonstrating that labour and commerce are productive of wealth, and enrich a nation, and that in commerce both sides gain, which had been maintained by Boisguillebert more than half a century before, and that it is advantageous to both nations. This proved, therefore, that all nations are interested in each other's prosperity and well being, instead of their destruction, as was the hideous doctrine of the Mercantile System.

35. Smith and Condillac are the heads of the two modern schools of Economists. Smith's work attained immediate reputation, and became the standard one in Europe on the subject, Condillac's was neglected at the time it was published, and was speedily forgotten; but his view of the subject has been revived of late years, and is now rapidly gaining the ascendancy in Europe and America. Hence we shall naturally speak of Smith's work first in historical order.

36. Adam Smith, who first published a work on Political Economy which greatly influenced public opinion in this country, was born at Kirkaldy, in Fifeshire, in Scotland, on the 5th June, 1723, a posthumous son of the Comptroller of Customs there. He was sent to the University of Glasgow in 1737, where he gained the Snell Exhibition to Baliol College, Oxford. He

resided at Oxford for seven years. In 1748 he delivered some lectures on rhetoric and *belles lettres* in Edinburgh, under the patronage of Lord Kames. In 1751 he was appointed Professor of Logic, and in the following year, Professor of Moral Philosophy in the University of Glasgow. In his lectures it is said that he advocated the doctrines of Free Trade which were then generally adopted by the most enlightened men in France, Italy, and Spain; but no account of these lectures has been preserved, and so we have no means of comparing his views then, with those published in the *Wealth of Nations* in 1776.

In 1763 Smith accepted the appointment of tutor to the young Duke of Buccleuch, and in March 1764 he set out with him for the continent. Passing through Paris they resided for about 18 months at Toulouse. Whether Smith had any knowledge of the writings of the Economists while at Glasgow, it is impossible to say, but it may be naturally assumed that he must have become interested in them when he resided in France, where they were exciting great attention. At Christmas, 1765, Smith and his charge went to Paris, where they staid about a year. Smith lived on terms of the greatest intimacy with Quesnay, Turgot and the rest of the Economists, and held Quesnay the chief of the school in such esteem that he had intended to have dedicated the *Wealth of Nations* to him, had he not died before its publication. It is impossible to say how much of the Wealth of Nations is original, or how much he adopted from the Economists, or whether it would ever have been published at all, if it had not been for his intimacy with them, and if he had not wished to correct the fundamental errors of their system.

In 1766 Smith returned to England, and settled himself at Kirkaldy for ten years, during which he was employed in the composition of the *Wealth of Nations*, which was published in 1776.

37. The *Wealth of Nations* is divided into 5 books, the first two only of which give what may be called the positive part of the science as understood by him. The third book contains an interesting historical account of the "Different progress of opulence in different nations." The first eight chapters of the fourth book contain a complete exposition of the Mercantile System and its fallacy; and the ninth and last chapter an

exposition of the errors of the system of his friends the Physiocrates, though some do not admit its completeness, and he has moreover fallen into the same error himself on the subject of unproductive labour, as he proved them to have committed. The fifth book is on the revenue of the sovereign, or commonwealth.

In the following remarks we can only trace the general outlines of Smith's system: his doctrines on particular points are fully considered in their proper places.

We have shown that in the passage in which it first occurs, the expression Political Economy is used to mean the method in which a Free State raises a revenue. The Physiocrates used it to mean the entire system of Government. "Political Economy," says Smith, *Introduction* to B. IV., "considered as a branch of the science of a statesman or legislator, proposes two distinct objects: first, to provide a plentiful revenue or subsistence for the people, or, more properly, to enable them to provide such a revenue or subsistence for themselves; and secondly, to supply the State or commonwealth with a revenue sufficient for the public purposes. It proposes to enrich both the people and the sovereign." Again, B. IV., c. 9, he says, speaking of the Physiocrates:—"This sect, in their works, which are very numerous, and which treat not only of what is properly called Political Economy, or of the nature and causes of the wealth of nations, but of every other branch of the system of civil government." Also—"As the Political Economy of the nations of modern Europe has been more favourable to manufactures and foreign trade, the industry of the towns than to agriculture, the industry of the country, so that of other nations has followed a different plan, and has been more favourable to agriculture than to manufactures and foreign trade." Thus Smith apparently meant by Political Economy that system of national policy which was considered most to favour the development of wealth in a nation: such as the mercantile system; the Physiocrate or agricultural system; and what is now called the Free Trade system.

Smith entitles his work "*An Inquiry into the Nature and Causes of the Wealth of Nations*" but he does not begin by clearly explaining what he means by "Wealth." The Physiocrates did: they call *Wealth* all the products of the earth which

are exchanged. This definition, though too narrow in a philosophical sense, is at least clear and intelligible. Smith nowhere tells us exactly what he means by "Wealth." But he repeatedly speaks of the "real wealth of the country, the annual produce of land and labour." In the next chapter we have shown that this definition is not clear; but without investigating it too closely here, Smith himself found it to be inadequate, so under the head of fixed Capital, he enumerates the "natural and acquired abilities" of all the inhabitants as part of the wealth of the nation. Now the "abilities" of the people cannot certainly be called the "annual produce of land and labour." Therefore he at once admits that there is another kind of wealth besides the "annual produce of land and labour," and so at once overthrows the fundamental doctrine of the Physiocrates, that the earth is the only source of wealth.

Again, under the title of Capital, he includes Paper Money, or Paper Currency of all sorts, such as Bank Notes, Bills of Exchange, &c. Now these are Credit. Therefore, Smith expressly includes Credit under the title of Capital. Now Credit is certainly not the "annual produce of land and labour," or either of them: and hence Smith admits the existence of a *third* species of wealth, different in its nature from the other two.

Thus, Smith commences his work on too narrow a basis. He fills the minds of his readers with the Physiocrate notion that all Wealth comes from the earth: and, therefore, that Labour and Materiality are necessary to Wealth: and then afterwards finding this definition quite inadequate, he expressly includes quantities by no means whatever the "annual produce of land and labour," and yet this never leads him to think of the necessity of correcting and enlarging his fundamental definition.

Again, after laboriously inculcating the doctrine that the real wealth of the country is the "annual produce of land and labour," he afterwards says that unless it is exchangeable, it is not Wealth at all. Hence the whole subject is thrown into irremediable confusion by Smith's conflicting doctrines as to the very nature of the fundamental word of the whole science—namely, "Wealth," and the cause of Value. For one half of the work is based upon the idea that Labour is the cause of Value, and the other half that Exchangeability is.

Now these two ideas are very far from coinciding; because

there are many things which may be the "produce of land and labour" which are not exchangeable; and there are most certainly many things, in reality by far the greater portion of "exchangeable" things, which are not the "produce of land and labour" at all.

Hence the ideas of Wealth, as being the "produce of land and labour," and as proceeding from "Exchangeability" are totally distinct, and fatal to any scientific treatise which considers them as identical, or coincident.

Nothing, too, can be more astonishing than the confusion into which Smith has fallen with respect to value in B. I., c. 5. He begins the chapter by considering the value of a thing to be anything which that thing can purchase, and therefore something external to it; and therefore as the relation existing between two quantities which are exchanged. Very soon afterwards he considers it to be the quantity of labour bestowed in obtaining the product itself. And thus he starts the idea of there being something of fixed invariable value independently of anything else—a notion just as rational as to suppose that there is some single quantity which is a fixed and invariable ratio; or some single quantity which is a fixed and invariable distance.

The hopeless perplexity and confusion into which the whole subject is thrown by these contradictory notions of the very fundamental terms of the science, thus render it quite useless as a general scientific treatise, whatever merits it may have on special points.

38. The solid and real advance which Smith achieved for the science was to class artisans, manufacturers, merchants, and traders as Productive Labourers, and to enforce the doctrine that in Commerce *both* sides gain.—And these, small as they may appear, were really of the deepest national importance, and worked a complete change in national policy.

39. The incongruity of ideas as to "Wealth" and "Value" in the *Wealth of Nations* gave rise to two distinct classes of Economists who adopt the different halves of the work.

The first that we shall mention is Ricardo, who perceiving this incongruity, says p. 5.—"Adam Smith, who so accurately defined the original source of exchangeable value, and who was bound in consistency to maintain, that all things became more or

less valuable in proportion, as more or less labour was bestowed on their production, has himself erected another standard measure of value, and speaks of things being more or less valuable in proportion as they will exchange for more or less of this standard measure. Sometimes he speaks of corn, at other times of labour as a standard measure; not the quantity of labour bestowed upon the production of any object, but the quantity which it can command in the market: as if these were two equivalent expressions, and as if because a man's labour had become doubly efficient, and he could therefore produce twice the quantity of a commodity, he would necessarily receive twice the former quantity in exchange for it."

Ricardo, therefore, deliberately rejects exchangeability, and adopts labour as the cause and measure of Value. He calls his book, "*Principles of Political Economy and Taxation*," but this is a misnomer. He expressly confines his inquiries to the principles which govern the value of "commodities which can be increased in quantity by the exertion of human industry, and on the production of which competition operates without restraint."

Though Ricardo begins by expressly limiting his inquiries to such articles, he very soon loses sight of this limitation, and applies his doctrine to *all* commodities; and as the followers of a master invariably exaggerate his defects, Ricardo's admirers adopt this extension of his doctrines to all commodities, quite overlooking the fact that he began his work by limiting them only to certain classes.

Ricardo's work should not therefore have been called the *Principles of Political Economy* generally, but rather a Treatise on the principles which govern the value of corn, minerals, and manufactures, with observations on wages, profits, and taxation.

The fundamental objection to Ricardo's system is this—that he divides the small number of articles he does treat about into separate classes, and endeavours to discover a distinct Law of Value for each class. Now this is utterly contrary to the spirit and fundamental principles of Natural Philosophy. The general principles of Natural Philosophy which dominate each separate science show that there can be but one General Theory of Value which governs all phenomena, although it is liable to be modified by disturbing causes in different classes of cases. Sir John

Herschel, in a passage we have quoted in a subsequent chapter, has exactly pointed out the true objection to the whole system of Ricardo and his followers. They imagine that there is some point at which prices have a tendency to *rest:* but that is not true; they are in perpetual oscillation; and the true object of the Physical Economist is to discover the Law of their variations. The price of things at any given time can only be an example of the General Law which governs their price at all times. In short, Economics is not a Statical science, as Ricardo and his followers make it, but a Dynamical science.

Ricardo justly censured Smith for his inconsistency of ideas with respect to value. But he falls into exactly the same error himself. He begins his work by saying: "The value of a commodity, or the quantity of any other commodity for which it will exchange," and then at p. 333, he says—"I cannot agree with M. Say in estimating the value of a commodity by the abundance of other commodities for which it will exchange."

Ricardo then, p. 4, adopts labour as the foundation of the exchangeable value of all things, excepting those which cannot be increased by human industry. But unfortunately, he soon forgets this important exception, which includes by far the greater portion of valuable things, and says p. 13.—"In speaking, however, of labour as being the foundation of *all* value." Also at p. 19.—"To convince ourselves that this is the real foundation of exchangeable value."

Ricardo therefore considers "the quantity of labour" embodied in obtaining any commodity as its value, making value to be something absolute and inherent, caused by labour. Thus he says in chap. xx., on the distinction between value and riches: "The labour of a million of men in manufactures will always produce the same *value*, but will not always produce the same riches." That is to say, whether the manufactures produced by the labour of a million of men sell for a million of pounds, or for ten pounds, they are of the same value!

Ricardo was so enthralled by the theory that labour is the sole cause of value, that at the end of the same chapter he maintains that natural agents, such as the sun, air, climate, "though they add greatly to value in use, never add exchangeable value" to a commodity, and "as they perform their work gratuitously, as nothing is paid for the use of air,

of heat, and of water, the assistance which they afford us adds nothing to value in exchange." Such a doctrine as this needs no more than a simple statement to insure its own refutation.

The doctrine that labour is the sole cause of all value, spread like a canker over the works of English Economists. Thus, McCulloch says in the introduction to his edition of the *Wealth of Nations*—"Nature is not niggard or parsimonious. Her rude products, powers, and capacities are all afforded gratuitously to man. She neither demands nor receives an equivalent for her favours. An object which may be appropriated or adapted to our use, without any voluntary labour on our part, may be of the very highest utility; but as it is the free gift of nature, it is quite impossible it can have the smallest value." He also maintains that "the exchangeable value, or relative worth of commodities, as compared with each other, depends exclusively on the quantities of labour necessarily required to produce them." The manifest absurdities to which such doctrines necessarily lead are exhibited in a subsequent chapter.

40. Before pursuing the line of English Economics, we must notice the very distinguished French Economist, J. B. Say, who was the founder of the second school of Economists in France. He published his first treatise in 1803, but as the later editions of his work, and his other works, were published after Ricardo, and he discusses Ricardo's doctrines in them, we took Ricardo before him.

The Economists, or Physiocrates, narrowly missed the glory of seeing their doctrines of Free Trade inaugurated as national policy on the overthrow of the Mercantile and Protective Systems. The awful catastrophe of the French Revolution took away the attention of men's minds from Economics, and when things had somewhat settled down, Smith's work was the principal one in Europe. J. B. Say's *Traité* was published in 1803, and he was the first to confine the name of Political Economy to the Production, Distribution, and Consumption of Wealth.—"Politics, properly so called, the science of the organisation of societies, has long been confounded with Political Economy, which teaches how the riches which satisfy the wants of society are formed, distributed, and consumed. Yet wealth is essentially

independent of political organisation. A state may prosper under all forms of government, if it is well administered."

This great work was the leading one in France until the rise of the new school of Bastiat and Michel Chevalier.

In this place we can of course only give a general outline of its system, without entering into all its merits. But it may be said that J. B. Say strongly insists that Economics is an Experimental and an Inductive Science, and not one of abstract dogmatism, as so many had made it. It is entirely founded upon facts.

The Physiocrates had made the "Production, Distribution, and Consumption of Wealth" part of their general system of Political Economy, but this referred exclusively to the material products of the earth. Smith began with this limitation, but in the course of his work incidentally enumerates the abilities and talents of the inhabitants, as well as paper credit, under the title of capital. But this is done in so cursory a manner that most persons believe he restricted the name of Wealth to material wealth. But J. B. Say at the beginning of his work emphatically includes talents as national wealth, and says a day's work has its value, the advice of a physician, a theatrical performance, have value like the practice of an advocate, and the goodwill of a shop, and under the title of wealth and capital he classes instruments of credit and the public funds. Thus J. B. Say distinctly recognizes and adopts the three species of wealth, Material or Corporeal, Immaterial, and Incorporeal. He had, therefore to enlarge the definitions of Production and Consumption to include them. He defines Production to be the adding of value to an object, and this may be either by obtaining it, or manufacturing and fashioning it, or by transporting it from one place where it is less valuable to where it is more valuable. Thus commerce of all sorts is one species of *production*. Thus Say completely adopts Smith's notions of Productive Labour.

Say defined Consumption to be the destroying the value of a product; and he says that everything is produced for the purpose of being destroyed—a proposition manifestly erroneous. The Physiocrates who adopted the word Consumption meant *purchase* in the first instance, and as they chiefly looked to subsistence they incidentally spoke of destruction. This second sense of Consumption, as meaning destruction, henceforth be-

came the predominant one in Economics, to the great confusion of the science, and the propagation of much error, as is more fully shewn in the next chapter.

Under the head of Consumption, Say includes Taxation and all public expenditure.

Say's works abound with philosophical observations, and the most valuable details. But, unfortunately, by adopting definitions of words without due attention to the generality of their meaning, and the consequences which flow from the different meanings of words given in different places, he is led into much contradiction of doctrine. The whole of his system is cumbrous and heavy, and all the truth he states can be infinitely better exhibited under the method of Exchanges.

On one subject, however, Say has been the cause of much mischief. He himself expressly classes instruments of credit under the title of wealth, and in a dozen different places says they may be used as Capital. But in another place after the most extraordinary self contradiction, he says, that Credit is not capital, because the same thing cannot be in two places at once; and this piece of absurdity has ever since been flung at the heads of those who say that credit is capital; but we have placed the original passage before our readers in a subsequent chapter, and they can see not only that it is an entire contradiction to what he has himself said in a multitude of places, but is itself simply unintelligible nonsense.

41. The last work of this school that it is necessary to notice, is Mr. John Stuart Mill's *Principles of Political Economy.*

The Physiocrates spoke of the Production, Distribution and Consumption of Wealth, which expression when really examined by their own explanation, meant the science of *Commerce* or Exchanges; the intermediate term Distribution meaning nothing more than the intermediate exchanges, or sales, a product goes through between the original producer and the ultimate consumer. And they, and all subsequent Economists, when they used the word Distribution, meant distribution by exchange, or sale, only.

But Mr. Mill has thrown the subject into confusion by making the science, Production, Distribution, and Exchange. Under the head of Distribution he has included an account of several

forms of Socialism, Wages, Rent, Profits, and inheritance and bequest. Now what has Socialism to do with Exchange? Socialism is for the avowed purpose of abolishing Property and exchange; whereas Economics is exclusively founded on Property. Nor is it in accordance with the scientific unity of the subject to class inheritance and bequest along with distribution by means of an exchange. Under Distribution he also examines wages, rent, and profits; but wages, rent, and profits arise out of an exchange, and come properly under the Theory of Value. Mr. Mill is indeed sensible of this, and speaks of being able to anticipate a small portion of the theory of value before he comes to treat of exchange. But wages, rent, and profits are by no means a small portion of the theory of value, and all other Economists who classed them under distribution, did so, because they were a portion of distribution by means of exchange, and did not make exchange a separate division from distribution.

42. Mr. Mill has also failed with respect to the term Wealth. He says it is no part of the design of his treatise to aim at metaphysical nicety of definition when the ideas suggested by a term are already as determinate as practical purposes require: and that every one has a notion sufficiently correct for common purposes of what is meant by Wealth. But, unfortunately, this is very far from being the case. Not only have many bloody wars been waged, which grew directly out of the meaning of the word Wealth, but at this moment, the widest differences of opinion prevail among Economists as to the true meaning of the word, and as to what should be included under the title, and Mr. Mill is quite inconsistent with himself with respect to its use. Thus, at p. 8, he says—"Everything forms, therefore, a part of Wealth, which has a power of purchasing." Now, this is the true definition of Wealth, and embraces everything that can be bought and sold: it includes the three species of exchangeable quantities which we have spoken of already. And Mr. Mill here makes wealth to depend upon exchangeability only, which is strictly in accordance with the definition which prevailed in ancient times. The production of Wealth must, therefore, include the production of anything which is exchangeable. But, at p. 25, he says—"The production of wealth; the extraction of the instruments of human subsistence and enjoyment from

the materials of the globe." Now, here Mr. Mill has relapsed into utter physiocracy, and makes all wealth come from the earth, which all exchangeable things do not, and the idea of exchangeability, which has invariably been held to be the characteristic of Wealth, has disappeared altogether from the definition: and he afterwards in B. I., chap. 3, § 3, expressly restricts the term to *material* wealth. It is evident that this latter restriction is quite incompatible with the first definition.

The fatal defect of this inconsistency is seen when he comes to speak of Capital and Credit. He lays down fundamental propositions regarding Capital, which are manifestly erroneous, even when applied to material things, and are altogether inapplicable to many kinds of property, which he has omitted, as more fully shewn in the next chapter.

Mr. Mill's System of Political Economy is only Ricardo's enlarged, and hence the same fundamental objection applies to it as to Ricardo's. It is statical, whereas Economics is dynamical. Mr. Mill has not only adopted Ricardo's system of separating Economic quantities into several classes, and endeavouring to establish a different fundamental theory of value for each, but he has added several distinctions of his own, which only add to the confusion.

43. But the fatal defect of Mr. Mill's work is of a different nature. Smith in the *Wealth of Nations* classes paper currency under Capital. Now paper currency is Credit, and Credit is the type of a class of property quite distinct from money, lands, houses, &c. It is called Incorporeal Property. In the days of Smith it was of comparatively small magnitude. But since his time it has increased at an immensely greater ratio than corporeal property. When a great author has written a work, the copyright of that work, perhaps, may sell for £10,000. Now that copyright is the produce of labour, and is Wealth. Again, when a person has traded long in a district, and has made a reputation, the Goodwill of the business is a valuable property, and may be sold, and is Wealth. Now the Copyright of a Work and the Goodwill of a business are as really the produce of labour as any material object whatever; and they are certainly not extracted from the materials of the globe. There are besides, other quantities of Incorporeal Property of immense magnitude, which are more fully mentioned in the next chapter.

Now Mr. Mill's definition of wealth, as being everything which has power of purchase, is large enough to include this property, but yet he wholly omits it, as if he were ignorant of its existence. Economics treats about property; and therefore it must include all kinds of property; and a book on Economics which wholly omits Incorporeal Property, is just as imperfect as a book on the Law of Property would be, which entirely omitted Incorporeal Property.

Now Credit is one species of Incorporeal Property, and very few persons indeed have any just idea of its enormous magnitude in this country. It appears that in the year ending 30th April, 1872, there passed through the Clearing House of London the sum of £5,359,272,000 in Credit. Now this Credit performed exactly the same functions in commerce as money. And this enormous sum was only, after all, a small fractional part of the Credit in the country; for it was nothing but the claims of the London Banks against each other. There are several other clearing houses in the country; and besides that, there are all the internal Credit operations of the different banks, and commercial credit. Now if this credit had not existed, it would have required an equal amount of specie to have carried on the same business: and it is easily seen that all the gold in the world would not suffice to carry on the commerce of England for a single year.

Now this immense mass of Credit is Exchangeability, or Value, pure and simple, stripped of all association of labour and materiality, and it tries to the quick, the doctrines laid down by Mr. Mill respecting Wealth and Capital: and in the chapter on Credit we have shewn Mr. Mill's strange inconsistencies on the subject of Credit, flowing from his unsteady conception of its nature.

But this species of property opens up considerations of a still more interesting character. These £5,000,000,000, which passed through the Clearing House, and performed the functions of money are Credit, or Circulating Debts. Now, for a long period, mathematicians have declared that Debts are Negative Quantities; that is if money is called *positive*, debt may be called *negative*. We have already seen, what we shall shew at greater length in the next chapter, that the Roman Lawyers expressly classed debts as Wealth. Now, what can be the meaning of

this? What can be the meaning of a Negative Economic Quantity? What is there in Mr. Mill's work to give the faintest clue to the solution of this enigma? And yet the commerce in these Negative Economic Quantities is the most gigantic of any in modern times. The quantity of money used in commerce is utterly insignificant when compared to the quantity of Credit.

44. This school of Economists had the glory of finally placing the doctrines of Free Trade upon an imperishable basis in England, and, therefore, in process of time of securing their establishment throughout the world; and in the course of various discussions which have taken place, many isolated doctrines have been proved.

45. But the fatal defect of the system of this school of Economists is exactly what has been described by Bacon in the *Novum Organum*. It is reared up on too narrow a basis of induction. The writers of this school take only a small class of objects which have value, and found general propositions upon observations made from this single class, which even if true, are only applicable to them, and are not generally true. They have forgotten the very first precept of the Baconian Philosophy—"Man the servant and interpreter of nature, can do and understand just so much as in fact or thought, he has observed the order of nature, and he neither can do nor know more." Now, whatever view be taken of Political Economy, at all events it deals with all sorts of property, and with all commerce. Consequently a knowledge of the Law of Property, and a thorough knowledge of the mechanism of Commerce is simply indispensable to an Economist. But those who write upon Economics take no pains to make themselves acquainted with law, or the simplest facts of commerce. And the consequence is that instead of an intelligible exposition of facts expressed in scientific language, we have nothing but literary dogmatism.

The ruin of this school in England is owing to the notion that Labour is the cause of, or even necessary to, Value. The followers of Ricardo assert that all value is due to human labour; whereas, as a matter of fact, the least acquaintance with practical business would have shewn them that by far the greater portion of valuable things have no labour connected with them at all. The consequences of this false notion are exactly described by Bacon—"The human understanding when

it has once adopted an opinion (either as being the received opinion or as being agreeable to itself), draws all things else to support and agree with it. And though there be a *greater number and weight of instances to be found on the other side*, yet these it either neglects and despises, or else by some distinction sets aside and rejects, in order that by this great and pernicious predetermination, the authority of its former conclusions may remain inviolate."[1] Again—"Men believe that their reason governs words; but it is also true that words re-act on the understanding; and this it is that has rendered philosophy and the sciences sophistical and inactive. Now words being commonly framed and applied according to the capacity of the vulgar, follow those lines of division, which are most obvious to the vulgar understanding. And whenever an understanding of greater acuteness or a more diligent observation would alter those lines to suit the true divisions of nature, words stand in the way, and resist the charge."[2] Now this is unfortunately the case with this school of Economists. Instead of searching out and collecting all species of Economic quantities before they commenced to frame their general Conceptions, and making them wide enough to embrace all species of quantities, they begin by filling and obscuring the minds of their readers with conceptions and doctrines drawn from only one small class of Economic quantities, and hence as these fundamental conceptions, these "notions of the mind (which are as the soul of words and the basis of the whole structure) are improperly and over hastily abstracted from facts, vague, not sufficiently definite, faulty in short in many ways, the whole edifice falls in ruin."[3]

The fact is that Economics has burst the bonds of the Physiocrate nomenclature. The fundamental conceptions of the Physiocrates were framed to include material products only; and when the second school came, and included in the science things, such as immaterial products, which were not contemplated by its founders, they stretched the definitions so as to include these new objects. But the attempt was hopeless, and only led to confusion. It was like putting new wine into old bottles: and Bacon says it is idle to expect any great advancement in science from superinducing and engrafting new

[1] *Nov. Org., B. I., Aph.* 46. [2] *Nov. Org., B. I., Aph.* 59.
[3] *Bacon. Inst. Mag. Distributio. Op.*

things upon old. We must begin again from the very foundations. Smith observes that "some of the best English writers on commerce set out with observing that the wealth of a country consists not in its gold and silver only, but in its lands, houses, or consumable goods of all differents kinds. In the course of their reasonings, however, the lands, houses, and consumable goods, seem to slip out of their memory; and the strain of their argument frequently supposes that all wealth consists in gold and silver."[1] So it is with the writers of the second school of Economics, who define it to be the Production, Distribution, and Consumption of Wealth, or something of that sort. They in some places admit that immaterial and incorporeal objects are wealth, but in the course of their arguments they invariably relapse into Physiocracy, and all their general conceptions and doctrines are founded on observing a few classes of material objects only, and not even all classes of material objects, and consequently they no more fit the facts of nature than the clothes of an infant will fit a full-grown man. To obtain a fitting general conception of the science we must turn to another school of Economists. Therefore, although the second school of Economists have rendered great services to mankind, and added many isolated truths to the science, yet their SYSTEM, like that of the Physiocrates, has passed away, and for the same reasons—it is not general—it is totally repugnant to the fundamental principles of Natural Philosophy—and it is not conformable to nature.

Principiis tamen in rerum fecere ruinas
Et graviter Magni magno cecidere ibi casu;
* * * * * * *
AMPLEXI QUOD HABENT PERVERSE PRIMA VIAI.

[1] B. IV., c. 1.

Section IV. The Third School of Economists.

Condillac—Whately—Bastiat—Chevalier—Perry.

46. We now come to the third school of Economists.

We have already said that when the Physiocrates spoke of the Production, Distribution, and Consumption of Wealth, they meant nothing more than Commerce, or Exchange. But their ideas only embraced material products. Production meant bringing the rude produce of the earth into commerce, distribution meant the intermediate sales, and consumption meant final purchase for use. The second school of Economists retained this name for the science of Political Economy, or Economics, but introduced into the science objects not included by the Physiocrates, to the great disturbance of its nomenclature. Several of them in this country made labour the cause of all value. Seeing, then, the general purport of their works, we came to the conclusion that Political Economy is nothing but the science of Exchanges, and that whatever is exchangeable must be included in it. At the time when we came to this conclusion we were not aware that any one else had expressed a similar opinion. But we afterwards found that Whately had said the same thing in his lectures at Oxford. The first edition of this work, published in 1857, was the first work on Economics which formally included the *Present Rights to Future Payment* as Economic Quantities, and gave an exposition of the actual mechanism of the commerce in debts, or the great system of Credit and Banking. Also, seeing the gross and palpable error of making labour the *cause* of value, we shewed that Demand *is the sole origin of Value:* and that it is not Labour which is the cause of Value, but *Value which is the cause of, or inducement to, Labour.* These conclusions are identical with those of Whately: and the first edition of this work was the only one we were then aware of, in which the science of Economics was developed on this fundamental conception.

47. But in the course of preparing our *Dictionary of Political Economy*, we came upon a work by the well known French Metaphysician, Condillac, which proves that he was the

originator of this idea, and that he is entitled to be considered as the founder of the latest form of the science of Economics, which is now rapidly gaining the ascendancy in Europe and America, from its manifest superiority to the two others we have discussed.

Condillac's work is called *Le Commerce et le Gouvernement, considérés rélativement l'un à l'autre.* It was published in 1776, the same year as Smith's *Wealth of Nations*, and though in some of his doctrines a Physiocrate, he rebelled equally with Smith against their classing artizans, manufacturers and merchants as unproductive labourers, and he also maintains that in commerce both sides gain, which as we have already said is the very advance that Smith made in the science.

Condillac intended to have published three divisions of his work; the first, in which the principles of Economic Science or Commerce are explained; the second in which the relations of commerce, or Economics to the Government, and their reciprocal influence over each other, are investigated, and under this division comes taxation; and the third containing a collection of practical examples, shewing the application of the principles developed in the two preceding parts; unfortunately the third part was never published.

48. As this work is but little known, we shall give a somewhat fuller analysis of it than we should otherwise have done, because although his principles are almost identical with our own, we had no knowledge of his work until long after our own was published, and it is only just that the first person who published these ideas should receive due recognition.

Condillac begins by saying at once that Economic Science is the Science of Commerce, or Exchange, thereby only expressing the idea of the Physiocrates as to the Production, Distribution and Consumption of Wealth in a much more simple and intelligible form, and also, which is its great advantage, in one which is *General.*

He begins by investigating the foundation of the value of things, and shews that it originates entirely from the wants and desires of men. These things which satisfy some want, have utility; and this *want*, or *estimation*, is called *Value.* To say that a thing has value, means that we think it useful for some purpose.

As people feel new wants, they learn to make use of things which they did not before. They give, therefore, value at one time to things to which at another time they do not.

Now, when things are very abundant, they feel the want of any particular portion less, because they are not afraid of being without it. On the contrary, when things grow scarce, they feel the want more, because they may be without them altogether.

Hence the want, or Value of a thing naturally increases during scarcity, and diminishes during plenty. During a very great plenty, this may diminish to any degree; on the contrary, during a very great scarcity, it may increase to any degree. Hence it is the variations in wants that give rise to all variations in Value.

Hence all Value resides in the MIND. But people have come to regard Value as an absolute quality which is inherent in things, independently of the opinion we have of them, and this confusion of ideas is the source of bad reasoning. Value is founded on estimation.

Value, therefore, exists before an Exchange. Condillac blames the Physiocrates for saying that Value consists in the relation of one thing exchanged for another. This criticism of Condillac's, however, is somewhat overstrained, because unless there be an exchange, there is no manifestation of Value, there is no *phenomenon*, which can be the subject of Economic Science. That science has nothing to do with an impotent desire of the mind, which has no external manifestation, but only with an effective desire which produces a phenomenon, or an effect. So mechanics has nothing to do with latent forces, which give no outward sign of their existence, but only with the *phenomena* produced by forces. So with credit, in a popular sense, credit means the estimation of a man's solvency held by the public, but Economic Science has nothing to do with a man's credit until he produces an Economical phenomenon by means of it; that is until he makes a purchase by means of his credit, or promise to pay, and that promise to pay, or right to demand payment, is credit in its legal, commercial, and Economic sense.

Condillac lays down as his fundamental doctrine—"A thing has not value because it has cost much, as people suppose; but money is spent in producing it because it has a Value." Every

one of common sense will give his assent to this doctrine; and it is exactly what Whately has said in his lectures, quoted below, and what we said in our Banking.

Value, then, being the desire we have to obtain something, Condillac shews that what we give to obtain what we want is called its price.

One man has more Corn than he wants, another has more Wine than he wants. The first wants Wine, the second Corn. They must therefore make an exchange. In such an exchange both parties will give what he wants less to obtain what he wants more: therefore each will gain. Nevertheless, as each will wish to gain as much as he can, he will naturally try to give as little as he can of his own, and get as much as he can from the other. This contention, however, must be brought to an end. An exchange takes place, and each thing exchanged is the price of the other. Hence, says Condillac, value and price are not absolutely identical so as to be used always convertibly with one another.

Here, again, Condillac is right to a certain extent; but since, as we have said above, value is not the subject of Economic Science, until it is manifested visibly by price, it can never lead to error to use price, or value in money, as convertible terms. No doubt value resides in the mind, but what we give for a thing is the measure of our value of it, and is the only thing we are concerned with. What we give for it may, therefore, be correctly called THE value of it in that quantity which we give, or its price.

Condillac then shews that all variations in price are caused by variations in what is called the *Law of Supply and Demand*, and, therefore, that there is no such thing as absolute price. The price varies from market to market and is always settled by competition: and it is useless and dangerous to prevent these variations.

Commerce is an exchange of two things, and everything which is exchanged is merchandize. Each article of merchandize is the price of the other. It supposes two things: first, a superfluity of possessions on one part; and secondly, a want on the other. Agriculturists and other producers, however, cannot always dispose of their surplus produce on the spot; there is, therefore, need of another class of persons to carry it

to where it may be more profitably disposed of, and these persons are called merchants. This gives rise to a greater number of exchanges. Moreover they give rise to value, because if there were no demand for the surplus on the spot where it is grown it would have no value, but when transported to a place where it is wanted, it acquires a value.

In this manner, therefore, commerce augments the mass of riches. It is true that it is the earth alone which produces all things, therefore it is the only source of riches. The agriculturist multiplies things of use by working the fields.

What then do merchants effect, if as is commonly said, an exchange is an equal value given for an equal value? If that were true it would be useless to multiply exchanges, and there would always be the same mass of riches. It is, however, false that in an exchange the values are equal. On the contrary, each party gives less and receives more. If they did not, there could be no gain on either side. But both sides gain, or ought to do so: for this reason, that value has no reference except to our wants, and that which is more to one is less to the other, and reciprocally.

The source of error is in supposing that things have an absolute value, and therefore people think that in an exchange they give and receive an equal value. Each, however, gives less and receives more, because he gives what he wants less, and receives what he wants more. It is the surplus which furnishes the funds for commerce, and this surplus becomes wealth when it can be exchanged for something that has value for the owner, and it has value for the purchaser. If the surplus could not be exchanged it would not be Wealth. Merchants are the canals by which this surplus is carried of, and thus they encourage husbandmen to grow more. A spring which loses itself in the rocks and the sands, is not wealth for me, but it becomes so, if I make trenches to carry it to my meadows. The spring is the surplus produce of the farmer, the trench is the merchant.

The wants of men as they multiply, give rise to the arts, and these increase the mass of wealth. Each artisan increases the mass of wealth, or the abundance of things which have value. The husbandman supplies the raw material, but it is the artisan who puts it into a form to be useful to society, and therefore gives it value. Every new art, therefore, gives rise to new

wealth, and gives a new stimulus to commerce, for which it supplies a new fund. Thus all husbandmen, merchants, and artisans combine to augment the mass of wealth. If, therefore, the earth is the only source of products, and therefore of wealth, we see on the other hand, that labour gives a value to a number of products, which without it would have none. It is therefore shewn that labour is also a source of wealth.

Condillac then discusses wages, and shews why wages differ in different employments. He then defends the right of property and bequest. He afterwards enters into a discussion as to the nature and uses of money, which is the same as that of the Physiocrates, and is now universally accepted by all men of sense. He observes, however, that the use of money as a measure of value, has given rise to the confusion about value. If men had continued to traffic by way of barter, they would have seen clearly that they always gave less and received more. But as soon as money was introduced, they naturally thought that it was an exchange of equal values, because each was then valued at the same quantity of money.

By means of money the respective values of quantities of corn and wine may be measured, and then men see nothing in their values except the money, which is their measure. All other considerations are lost sight of, and because this quantity is the same, they think that each of the quantities is equal in value. Nevertheless, although a man gives a quantity of corn valued at 10 ounces of silver, and receives a quantity of wine valued at the same, it by no means follows that the advantage of both parties is equal. Because if the corn is absolutely necessary to one, and the wine is not necessary to the other, one has the advantage and the other not. The comparative gains of the parties are, therefore, to be estimated by the intensity of their relative wants, and not by the absolute amount of money.

The merchant buys things wholesale, and sells in detail, and receives back the price. Thus continual small sales replace the sums spent in purchasing in gross; and when this replacement is made, purchases are again made in gross to be replaced in detail. Money is, therefore, always being scattered, to be again collected into reservoirs as it were, from which it is again spread by a multitude of small canals, which bring it back to its first reservoirs, whence it is again scattered, and to where it

again returns. This continual movement, which collects it to scatter it, and scatters it to collect it, is called CIRCULATION. And this circulation manifestly means an exchange at each movement. If there is no exchange, it is not *circulation*. Mere transport of money is not circulation. In circulation the money must as it were transform itself into something else. Credit, however, is used to a great extent instead of money, and performs the same functions.

Riches are only multiplied by labour. All products are owing to the labour of the husbandman, and all the forms given to raw produce are owing to the artisan and the artist. Moreover, these riches only acquire a value by the labour of the merchant, who transports them from where they are superabundant to where they are wanted. The value of things is, therefore, partly due to the labour of merchants. Moreover, all these classes want a protector to preserve order. The Government, therefore, combines with others to increase as well as to preserve wealth. That nation is most rich which gives occasion to the greatest variety of labour. Let us suppose for a moment that all the nations of Europe guided themselves by these principles, which perhaps they will never understand, there would then be entire Free Trade, in which they would all find their advantage. All equally busy they would feel their mutual want. They would no longer think of depriving each other of their manufactures and commerce. They would be satisfied each to work and to have something to exchange. What does it matter whether a certain species of cloth is made in England or in France, if the English are obliged to exchange their cloth for other manufactures of France. Only let us work and we shall have nothing to envy other nations. As much as we want to work for them, just so much do they want to work for us. If we want to take their works they want to take ours; we injure them, they injure us. Absolute freedom of employment then is the true source of wealth. But at present, occupied in doing each other as much injury as possible, each nation wishes to enjoy exclusively the advantages of commerce: each in the exchanges made wishes to keep all the profit. They do not see that by the very nature of an exchange there is necessarily a profit on both sides, because each side gives less and receives more.

A single person who does not know the true market price

may be cheated in his purchases. Nations are merchants: it is at home that the markets are held: the price of things is known to them. By what art then can we force them to give us always more for less, in respect to them, when we always give them less to receive more in respect to us? This art is nevertheless the grand object of government. It is the philosopher's stone which they are searching for, and which they will assuredly never find.

But it is said that it is of the greatest consequence to draw to ourselves as much gold and silver as possible from foreign nations. We must therefore prevent them from selling to us what they produce or manufacture, and force them to buy what we produce or manufacture.

You really believe then that a million of gold and silver is greater wealth than a million of other productions! Are you really ignorant that productions are the first wealth? What will you do if other nations, who reason as ill as you do, wish also to draw your gold and silver to themselves? That is what they will try. Every nation will, therefore, try to prevent foreign merchandize from coming to them. And if they succeed, it is a necessary consequence that their own merchandize will not go anywhere else. For, wishing to keep each to itself all the profits of trading, they will cease to trade with one another, and thus they will lose all profits.

Such is the effect of prohibitions. Who yet dares to be sure that Europe will open its eyes? I wish it would; but I know the force of prejudice, and I don't expect it. In short, commerce is not for Europe an exchange of works in which each nation finds a profit; it is a state of war, in which each tries to rob the other. They think as they did in times of barbarism, that nations can only grow rich by robbing their neighbours. Condillac then earnestly advocates unbounded freedom of trade. The first part concludes with a chapter giving a *résumé* of the doctrine of the whole.

Condillac having thus in the first part traced the grand outlines of Economic Science, and shewn that universal free trade is the proper order of things, in the second part takes general free trade as the basis of his argument, and examines in succession the mischievous consequences produced by all violations of, and attacks on, the principle. These are wars, custom

houses, taxes on industry, privileged and exclusive companies, taxes on consumption, tamperings with the currency, government loans, paper money, laws about the export and import of corn, laws about the internal circulation of grain, tricks of monopolists, the commercial jealousy of nations, and other things. The effects of each of these are examined with admirable skill.

Such is a brief outline of the first two parts of this work. The third, unfortunately, was never written. Although we have been obliged to omit several excellent points, the analysis given will show the general scope of this admirable work, and its great importance is manifest; for it is the true foundation of modern Economics.

Condillac expressly declares the true function of Economic Science to be the Science of Commerce. And in dealing with the subject we see the immense superiority of a mathematical and metaphysical mind; for he places the source of value in the human mind, in wants and desires, or in DEMAND; and, having done so, he naturally shows that all variations in value depend on variations in demand and supply; that is, he instinctively, as a physical philosopher, never dreams that there can be more than one fundamental theory of value. He, as every physicist who really paid attention to the subject, would have been utterly aghast at the notion that the science could be based on six or seven fundamentally conflicting theories of value, as is the fashion at the present day.

Condillac has been classed as a Physiocrate, because he says in one place that the earth is the source of all wealth. He also maintained that all taxation should be laid at once directly on the *Produit Net*, and that all indirect taxation, however, imposed, ultimately came back upon the rent of land. We shall defer any observations on this theory of taxation until the chapter on taxation; but on the first point we may say that his fundamental conception and his doctrine in one place is wider than in another. For he says that Economics is the science of commerce, which is the exchange of two things, and that everything which is exchanged is merchandize. The generality of this definition covers any new things which may be brought into commerce, even though not at first contemplated by him.

It is true that Condillac's work can by no means be considered

as a complete treatise, and it requires immense development. But it lays down the broad general outlines of true Economics. Smith's work and Condillac's were published in the same year. Smith's obtained universal celebrity in a very short time. Condillac's was as far as we can find out, quite neglected. Nevertheless, the whirligig of time is now bringing about its revenges; for all the best European and American Economists are now gravitating to the opinion that Condillac's is the true conception of Economics. The beautiful clearness and simplicity, the instinct of the true physicist are visible throughout; at length he will receive justice, and after the neglect of 95 years he will emerge as the true founder of modern Economics.

49. The next writer whom we know of to have adopted this conception of Economics is Archbishop Whately, when Professor of Political Economy at Oxford. In his lectures delivered in 1831, he says p. 3.—"A. Smith has designated his work a treatise on the 'Wealth of Nations;' but this supplies a name only for the *subject-matter*, not for the science itself. The name I should have preferred as the most descriptive, and, on the whole, least objectionable is that of CATALLACTICS, or the "Science of Exchanges."

"Man might be defined, 'An animal that makes Exchanges'; no other even of those animals which in other points make the nearest approach to rationality, having, to all appearance, the least notion of bartering, or in any way exchanging one thing for another. And it is in this point of view alone that Man is contemplated by Political Economy. This view does not essentially differ from that of A. Smith; since in this science the term Wealth is limited to *Exchangeable* commodities: and it treats of them so far forth only as they are, or are designed to be, the subject of exchange. But for this reason it is perhaps the more convenient to describe Political Economy as the science of Exchanges, rather than as the science of national Wealth. For the *things* themselves of which the science treats, are immediately removed from its province, if we remove the possibility, or the intention, of making them the subject of exchange: and this, though they may conduce in the highest degree to happiness, which is the ultimate object for the sake of which wealth is sought. A man, for instance, in a desert island, like

Alex. Selkirk, or the personage his adventures are supposed to have suggested, Robinson Crusoe, is in a situation of which Political Economy takes no cognizance: though he might figuratively be called rich, if abundantly provided with food, raiment, and various comforts: and though he might have many commodities at hand, which would *become* exchangeable, and would constitute him strictly speaking rich, as soon as fresh settlers should arrive."

"In like manner a musical talent, which is wealth to a professional performer who makes the exercise of it a subject of exchange, is not so to one of superior rank who could not without degradation so employ it. It is in this last case, therefore, though a source of enjoyment, out of the province of Political Economy."

This is enough to shew Whately's general conception of the science; we shall have to cite him on several occasions in future, to shew how clearly he saw the fundamental fallacy of the Ricardian system of Economics. His lectures, however, fell like the good seed on barren ground in England; and Ricardo's system gained a temporary popularity by being adopted and expanded by Mr. J. S. Mill.

50. The next most illustrious propagator of this system was FREDERIC BASTIAT, who revived and popularized the doctrines of Condillac in France. We regret that we cannot in this place give an account of the most popular writings of this brilliant genius, because they are *destructive*, they were written to combat Protection and Socialism with which kindred errors France was entirely imbued. But we have given an account of them in our *Dictionary of Political Economy*. All that we can state here is that Bastiat held Political Economy to be the Science of Exchanges. He says "Exchange is Political Economy."[1]—"The causes, the effects, the laws of these Exchanges constitute Political Economy." And speaking of persons rendering each other services, he says—"There true Political Economy begins, because it is there we see the first appearance of VALUE."

Bastiat also places the source of value in the mind, as fully shewn in the chapter on Value.

[1] *Harmonies Economiques. Exchange, p.* 83.

Statement of the Argument in Favour of the third School of Economists.

51. Having thus given an historical account of the progress of ideas as to the nature and limits of Economic Science, we may state the argument in favour of the superiority of the views held by the third school of Economists.

Ever since certain enlightened and far-seeing men discerned that there is a definite body of science to which they gave the name of Political Economy, or Economics, they have said that it is a Physical Science, and that its investigations are to be pursued in a manner analogous to those of the other Physical Sciences. If then this be admitted, it follows that it must be constructed in a manner somewhat similar to the various Physical Sciences, which have already been reared up, and serve as models for the construction of new sciences.

Now the general fundamental conditions of a Physical Science are these: That it is some great body of phenomena all based upon some single conception, or quality of the most general nature. The purpose of the science is to discover the laws of these phenomena. Furthermore, every science must be based upon certain conceptions which must be perfectly general, and upon certain great principles which must also be perfectly general.

If, then, Political Economy, or Economics, is a Physical Science, as asserted, it must be some large body of phenomena, all based upon some single conception, whatever that may be; and if it is to be a science of the same generality as the other physical sciences, it must be based upon conceptions and axioms of the same wideness and generality as those of physical science. The question therefore is—What is that body of phenomena, all based upon a single idea, to which the name of Economic Science may be applied? And furthermore, if there should be a certain agreement among Economists as to its general nature —what is the best conception of it—that which most clearly and distinctly marks out its nature and limits, and its separation from other sciences, and that, in fact, which is most in accordance with, and shows its relation to, the great body of Physical Science?

Economists are now agreed that the science treats ex-

clusively of Wealth; though they are very far from being agreed as to what Wealth is, or as to what the science of Wealth is. But there are two definitions of the science, each of which has numerous and distinguished adherents; and we have now to consider these two definitions, and to state the reasons which shew that one of them is superior to the other, and that the preference ought to be given to it, as most clearly marking out the character of the science, and its separation from other sciences, and also as shewing most distinctly how it may be brought under the general dominion of the acknowledged laws of Physical Science.

The two definitions of the science which may be said to divide Economists are these:—

1st. *It is the Science which treats of the Production, Distribution, and Consumption of Wealth.*

2nd. *It is the Science of Exchanges, or of Value.*

Now with respect to the first of these definitions we observe that there are four words in it which are wholly unexplained: *Production, Distribution, Consumption, Wealth.*

Mr. Mill says that every one has a sufficiently distinct notion of what Wealth is. But that is very far from being the case. When we search for a definition of Wealth in the writings of Economists, we find that there is none, and that scarcely two Economists agree as to what Wealth is. So far is it from being clear what wealth is, that it requires a long investigation to trace the differences of ideas on the subject, and to determine what is its true extent.

All persons, however, would agree that corn, and clothes, and furniture, and manufactures, and so on are wealth. The production of corn, and clothes, and furniture, and manufactures is the production of wealth. Therefore when it is said that Political Economy treats of the production of wealth, it would probably strike a person who had not very much considered the question that it related to the production of corn, of clothes, furniture, manufactures, and so on. Therefore it might seem that it is the duty of Political Economy to treat of the business of farming, manufacturing, and so on: and that to learn Political Economy is to learn the whole business of farming, manufacturing, and so on. But every Economist would at once say that it is not so. He would say that Economic Science

has nothing whatever to do with the art and process of farming, or with the arts and processes of manufactures, but only with the price or value of the corn, manufactures, and so on, when produced. Every Economist would at once say that his science has nothing to do with the arts and processes by which things are obtained, but only with the cause of their value, and the changes of their value when produced.

Hence we see that the word *Production* in Economics must bear some very technical meaning, which is by no means apparent at first, and that is a good and sufficient reason why it should not be made part of the definition of the science.

Again, every lawyer and every merchant knows that a debt is a certain species of property. But it would startle many persons who have not received a legal or commercial education to be told that a debt is Wealth. It is certain that the quantity of debts in circulation amounts to many hundreds, if not thousands of millions of money in value, yet it would startle many persons to tell them that these debts are so much wealth, as much as an equal amount of gold and silver; and yet every lawyer, every merchant, and every Economist knows that they may be made of exactly the same value as money, and perform all the functions of money. A merchant creates a debt by accepting a Bill of Exchange, and a banker creates a debt by issuing a bank-note; it would startle many persons to be told that they were thereby creating wealth!

The business and mechanism of banking is manifestly one of the most important branches of Political Economy. Now banking exclusively consists in buying money and debts, by creating other debts; and it is by no means easy to perceive at once how buying debts by creating other debts comes under the idea of the definition of the Production, Distribution, and Consumption of Wealth.

This is one example of the perplexities and embarrassments that spring up when we consider the words Production of Wealth.

Similar difficulties attend the word *Consumption*, which by recent Economists is used to mean destruction. Now Economic Science has nothing to do with the way in which a purchaser destroys an article, or whether he destroys it at all, but only with the price he pays for it. Hence, as in the case of

Production, the word Consumption must bear some technical meaning which requires some investigation to discover, and that shews it ought not to be made part of the definition of the science.

Economic Science, however, treating of Wealth, and being the Science of Wealth, we must consider what is that *Quality* of things in regard to which they are to be considered as wealth, and that quality being ascertained with regard to any one class of quantities, we must generalize the idea and include under the title of Wealth, all quantities whatsoever which have that quality, whatever other qualities they may possess.

Now from what we have already said, in this chapter, it appears that the earliest writers in antiquity who considered the question, the Roman lawyers, and Economists of all schools, have unanimously declared that the *Quality* of things which constitutes them Wealth is EXCHANGEABILITY. It is not because they are useful and agreeable in any way that they are technically called Wealth—but solely because they are EXCHANGEABLE.

Hence we have at last found that great general conception of which we were in search: and from this conclusion it naturally follows that if Political Economy be the science of things, so far as regards their being Wealth, it must be the science of them with regard to their exchangeable relations, and that only.

We have already shewn that Exchange is really the idea at the basis of all systems of Economics. The Physiocrates by the words Production, Distribution, and Consumption of Wealth in reality only meant the Commerce, or Exchange of material products of the earth. But the restriction of the science to the material products of the earth only is contrary to true science. If we allow that it is exchangeability which makes them to be wealth, then anything which is exchangeable, whatever its nature be, must be Wealth.

The reason why the definition of the Science as the Science of Exchanges is greatly preferable to that of its being the Production, Distribution, and Consumption of Wealth, though they are really identical, is now apparant. It at once makes out a clear, distinct, and circumscribed body of phenomena, separated from all others, and based upon a single conception; and it at once frees the science from the perplexities and embarrassments of the former definition. It is at once seen how it satisfies the

general conditions of Physical Science: for we find a distinct order of Quantities having the common property of EXCHANGEABILITY. We find that we have a new order of Variable Quantities: and we can at once pronounce that the general Theory of Exchangeable Quantities must be brought into harmony with the great general Theory of Variable Quantities in general. And it will be found that all the various discordances of opinion among Economists may be settled by the acknowledged principles of reasoning in the Physical Sciences.

The sole difference between the Physiocrates and the Economists of the third school is this—Are exchangeable material products of the earth *only*, or are ALL Exchangeable Quantities of all kinds to be brought within the Science of Economics?

The Economists of the second school fell, as we may say, between two stools, for they started with the nomenclature of the Physiocrates, and laid down conceptions and laws drawn from that narrow basis, but in the course of their reasoning they were led to include *all* exchangeable quantities in the science; and by so doing they tortured and twisted its terms in such a way as to plunge the whole subject into hopeless confusion, and themselves into the most incredible self-contradictions.

Now if we adopt exchangeability as the general idea of Wealth, the principles of true science shew that we must include in it all Quantities whatever that are Exchangeable, no matter what their nature be, Material and Corporeal, Immaterial or Incorporeal, enduring or evanescent.

Hence we see evidently that the domain of Commerce includes exchanges of all these various kinds of Property, and consequently they must all be included in Political Economy, or Economics, and thus we have a distinct and circumscribed body of phenomena whose laws we have to investigate.

As soon as we adopt this conception, we see how the science becomes amenable to the general principles of Natural Philosophy. In the first place we observe that the fundamental conceptions of the science must be capable of grasping ALL species of Economic Quantities. Thus, for instance, it is essential that there should be but one cause of Value, and what that single cause is, must be determined by the ordinary principles of Inductive Logic. It would be utterly contrary to the principles of Inductive Logic to break up Quantities into distinct species,

and say that one species had value for one reason, and another species for another reason. That would be at once to destroy the generality of the Science.

Moreover it is essential, according to the principles of Natural Philosophy, that there should be but one general fundamental law governing the relations, or the Value of the Exchangeable Quantities. It is utterly contrary to the acknowledged standards of reasoning in Inductive Science to break up the science into separate classes of cases, and to say that there is a distinct fundamental law of Value for each. If, then, there be a number of distinct laws proposed, it is the business of the Physical Economist, who wishes to bring the science into harmony with the other physical sciences, to examine and to decide by the acknowledged principles of Inductive Logic, which out of several proposed laws, is the single general one to be adopted, and which are to be rejected.

Moreover it is easy to shew that the conception of exchanges better expresses the notion of those who regard it as the production and distribution of wealth than their own definition. For how is wealth distributed? By no other method than that of exchange. If a man wants to have bread distributed to him, he must have something to give in exchange for it, such as shoes and other things. And if a man wants shoes distributed to him he must have something, such as bread, to give in exchange for them. Hence the shoemaker and the baker are each producers, and the reciprocal distribution of the produce of each to the other is an exchange. And the very object of Economic Science is to discover the laws of these reciprocal distributions or exchanges. Hence the Science of Exchange is simply the Science of Production and Distribution, under a shorter, clearer, better, and more expressive name.

The difference, therefore, between the works of the Physiocrates and this work is that they treated only of the exchange of *material* products, whereas this work treats of *all* exchanges: and we may give a few examples to shew the great superiority of the definition adopted by the third school of Economists.

The great system of Credit consists in the creation, sale, and extinction of debts. The business of banking, one of the most important departments of Political Economy in modern times, consists exclusively in buying and selling money and

debts by means of other debts. When a banker buys a Bill of Exchange, which is a mercantile debt, by means of his own notes, which are other debts, that is a sale or exchange of two properties, just as much as the sale or exchange of gold for corn; and the variations in value between the commercial debts and the banking debts are subject to exactly the same general law as the variations in value between gold and corn. But how does the sale or exchange of debts for debts come under the Production, Distribution, and Consumption of Wealth?

A great author writes a work and sells the copyright for £5,000: that is, a Sale or an Exchange: but how is it the Production, Distribution, and Consumption of Wealth?

A tradesman establishes a prosperous business and sells the goodwill of it; that is a Sale or an Exchange: but how is it the Production, Distribution, and Consumption of Wealth?

So we may buy or sell the public funds, or shares in commercial companies of all sorts; these are Sales, or Exchanges: but how are they the Production, Distribution, and Consumption of Wealth.

We may buy or sell land in the city of London; that is a Sale or an Exchange; but how is it the Production, Distribution, and Consumption of Wealth?

We might extend the number of these examples; but these are quite sufficient to shew the great superiority of the definition of the third school over that of the other two.

Many persons who had not received a legal or commercial education might feel a considerable difficulty in including such properties as Debts, the Funds, a Copyright, &c., under the title of Wealth, as that word has been so associated in modern discussions with articles of personal enjoyment. But every one must admit that these properties are bought and sold every day by millions, and consequently though they might feel a difficulty in admitting them to be wealth, no one can have the slightest difficulty in admitting that they are Exchangeable Quantities, and must be included in a general Science of Exchanges.

Such, then, is the body of phenomena all based upon the single conception of exchanges which is now held by the majority of modern Economists to constitute the domain of the Science of Economics; and whose laws are to be investigated on the principles adopted in all Physical Sciences.

52. Let us now make a few remarks on Mathematical Science in general.

Mathematical Science extends its dominion over three distinct classes of subjects.

First: the science of pure number which is called Arithmetic.

Secondly: the theory of Dependent Quantities, which is again sub-divided into those which depend upon each other by what may be called the principle of cause and effect, when the effect varies proportionably and directly as the cause; and, thirdly, those which are connected with each other by what may be called the principle of simultaneous variations, such as geometrical curves, where the ordinates vary simultaneously by some arbitrary but determinate law, but yet not by the principle of cause and effect.

Thirdly: the last class is that of independent quantities, or of events of the same nature, but not connected by any law, which is the theory of probabilities.

Now, any body of phenomena whatever, which possesses the characteristics of either of these three classes, may be brought under the dominion of mathematics, by the very principle of the generality of science.

Thus, for instance, the laws of arithmetic are absolutely universal. We state it as an abstract and universal truth that $3 \times 3 = 9$, whatever the quantities be. If it were possible to imagine a science in which $3 \times 3 = 11$, that would at once destroy the generality of arithmetic.

The very same principle of universality holds good with regard to the other classes of subjects. The great general theory of Dependent Quantities must be absolutely universal; the great general theory of Variable Quantities in general must of necessity comprehend all orders whatever of Variable Quantities. This is the great *Law of Continuity*, which dominates all sciences. Why is it that all the great physical sciences, such as astronomy, optics, heat, electricity, sound, and others of such divers natures, may all be brought under the grasp of general equations? It is simply for this reason, that there is a great general theory of Variable Quantities, of which each of these is only a particular case.

Hence we may lay this down as a fundamental condition of our method of investigation, that if we have to consider any

new order whatever of Variable Quantities, they must rigorously conform to the general laws of Variable Quantities. To suppose that a new order of Variable Quantities could depend upon laws fundamentally contrary to the general theory of Variable Quantities would at once shake to its foundations the whole of mathematical science, just in the same manner as if we could imagine a science in which $3 \times 3 = 11$ would destroy the generality of Arithmetic.

Now the fundamental condition of the science of any body of Variable Quantities of either order is this, that there can only be one single and general expression which must be capable of grasping all the phenomena.

In the history of the various physical sciences, such as Astronomy, Optics, &c., different opinions have been held as to which was the true general theory of the subject. But no one ever supposed that there could by any possibility be more than one. No one ever dreamt of breaking up the body of phenomena into a number of distinct classes, and accounting for each by means of a distinct theory, which was contradictory to each of the others. No one ever dreamt of writing a book on Astronomy and explaining one class of phenomena by means of the Ptolemaic theory, another class of phenomena by means of the Copernican theory, and another class by means of the Tychonian theory. No one ever wrote a book upon Optics in which one chapter adopted the Corpuscular theory, and another chapter the Wave theory of Light. In such a way of treating the subject, there could, of course, be no such thing as a general law in the science.

Arguing then from analogy, and by the great doctrine of the *Continuity of Science*, we may lay it down as a fundamental condition that if we have to discuss any new order of Variable Quantities, it must conform to the general theory of Variable Quantities.

Now, Economic Science treats of a new order of Variable Quantities, and the science regards them in a new variable relation, namely, that of Exchangeability. The object of the science is to ascertain the variations of their exchangeable relations with each other. Arguing then on the above mentioned principles, it may be said that it is a fundamental condition of the science that the exchangeable relations of all

quantities, whatever their nature be, must be brought under the grasp of one single general law, or one single general equation, and no more.

Now, admitting that the Ricardo-Mill system of Economics is widely prevalent in this country, it is well known that it breaks up Economic phenomena into a number of distinct classes of cases, and it assigns a distinct law of Value for each of these classes. Now such a method of investigation is utterly inadmissible. If it be true that Economics is a physical science, such a method of investigation is in direct violation of the fundamental principles of Natural Philosophy.

To permit such a method of investigation would be simply to destroy the generality of the Theory of Variable Quantities, as much as if we could imagine that in any case whatever $3 \times 3 = 11$, it would destroy the generality of arithmetic; for it would be as much as to say that there is an order of Variable Quantities which is not subject to the general Theory of Variable Quantities.

It is quite easy to demonstrate that there is, as the principles of Natural Philosophy shew that there must be, one great general equation which comprehends all the phenomena of the exchangeable relations of all quantities, whatever their nature be, and all the distinctions set up by the Ricardo-Mill system may be annihilated by the *Law of Continuity*, and reduced to this one general law.

And now we see how Economics is a great Physico-Mathematical Science. The Physical part of it, or the facts, can only be known to those who are properly instructed. Many persons suppose that it is very easy to see and describe facts. But that is a great mistake. In all sciences it requires an educated eye to be able to see the facts. Nothing can be more remarkable than the statements of two able men, Senior and Whately, that "the facts on which the general principles of the Science rest may be stated in a very few sentences, and indeed in a very few words."[1]—"Political Economy, is indeed a science which is founded on facts, and which has a practical application in reference to facts; but which yet requires for the establishment of its fundamental principles very little information beyond what is almost unconsciously, and indeed unavoidably required by

[1] *Senior's Treatise on Political Economy, p. 4.*

every one."[1] So far from the facts of Economics being capable of being stated in a very few words, and being unconsciously and unavoidably acquired by every one, we may say that it requires a greater variety of knowledge than any other science whatever, even to see the facts. For what are the facts of Economics? It deals with all Property of every description, and with all commerce. Consequently a knowledge of the Law of Property of every description, and a thorough knowledge of the entire mechanism of commerce is absolutely indispensable to enable any one even to see the *facts* of Economics: and to devise a Theory of the Phenomena, which shall be conformable to the principles of Natural Philosophy, of course indispensably requires a knowledge of Physical Science, and the methods of reasoning which have brought the various sciences to their present state.

53. These considerations will be sufficient to satisfy all persons of competent knowledge that Economics is essentially a physical science. But we will now go further and shew from the books that are in constant use that it is already implicitly acknowledged to be a Mathematical Science.

If we take up any book of Algebra, we find it stated among the usual illustrations of the meaning of the Algebraical signs + and —, that Money is a positive quantity, and that a Debt is a negative quantity. Now Money and Debts are each of them exchangeable, and therefore Economic Quantities. Hence we see it at once acknowledged that there are Positive Economic Quantities, and Negative Economic Quantities. Now let us ask this question—What can be the meaning of a NEGATIVE Economic Quantity?

Now we know perfectly well that in other great sciences there are positive quantities and negative quantities. Mathematicians have fully explained to us the meaning of the Negative Sign in Algebra, Trigonometry, Analytical Geometry, Mechanics, Optics, Astronomy, Electricity, and so on. We all know the meaning of the negative sign in each of these. But has any Mathematician ever told us what a Negative Economic Quantity is? Or has any Mathematician ever explained the Theory of the Negative Sign in Economics?

Some persons may be ready to give some sort of reply like

[1] *Whately's Lectures, p.* 149.

this: a man's money is positive and his debts negative. Subtract one from the other, and the remainder, if any, is his property.

The slightest reflection will show that this explanation wholly fails. Take any of the sciences already mentioned, in which the negative sign occurs, and are negative quantities subtractions from positive ones? They certainly are not. Every one knows that in all these sciences negative quantities are not subtractions from positive ones, but separate and independent quantities, having as real an existence as positive ones; and that the total science is composed of positive quantities together with negative quantities.

We may already see, then, from the analogy of all other sciences that Negative Economic Quantities cannot be subtractions from Positive Economic Quantities, but that they must be separate and independent ones, and that the complete Science of Economics must comprehend Positive Quantities together with Negative Quantities.

We are told that a Debt, or Credit, is a negative quantity. Now a Debt, or Credit, is the *Right to a Future Payment*, and is the type of an enormous mass of Property. The Funds are of the same class of Property. They are also Negative Economic Quantities, and what are they to be subtracted from? We have already stated that upwards of £5,000,000,000 of Debts, or Credit, passed through the London Clearing House in one year; these are Negative Quantities, and what are they to be subtracted from? And this stupendous sum is only a small part of the credit employed in the country. Take the accounts of any great public bank—on one side of the account is a sum of a great many millions of credit, entirely Negative Quantities; on the other side is an equal sum consisting of a comparatively small sum in money, or Positive Quantities, together with a much larger sum in credit, Negative Quantities. Now in these great accounts, consisting chiefly of Negative Quantities, what are they to be subtracted from?

Furthermore under this species of Property is included about 32 parts of 33 of the value of Land, Copyrights, Patents, Tolls, Ferries, all Annuities, and that stupendous mass of Property, consisting of Shares in Commercial Companies: in short, the whole of that species of Property known in law by the name of

Incorporeal Property, which in this country includes about 95 per cent. of Economic Quantities, and the greater part of which is entirely omitted from the ordinary books on Political Economy. Now, how are we to subtract 95 per cent. of Economic Quantities from the remaining 5 per cent.: and how is Incorporeal Property to be subtracted from Corporeal Property?

It is manifest that it is a scientific problem of the highest importance to develope the Theory of the Negative Sign in Economics, as under these Negative Quantities, which Algebraists pass over with a simple remark, is contained the whole Theory of Credit, which has exercised such prodigious effects upon nations for good and for evil, which are not in any way inferior to those of the Steam Engine.

54. According to this conception, then, of Economics, which is the one to which the majority of Economists are now gravitating, we see at once that a great new Physical Science is presented to us, which is in all respects fitted to be raised to the rank of an exact science. For we shall find that the same general laws of Exchange hold good among all nations, among the rudest and the most civilized, and in all ages and countries. We find that the same causes are invariably followed by the same effects, which are always measured numerically, and that is why Economics may be raised to the rank of a permanent and universal science of the same rank as the physical ones, because it is based upon principles of human nature which are found to be as universal and permanent as those of physical substances upon which the physical sciences are based.

55. We have shewn that this conception of the nature of the Science exactly represents the ideas of the Physiocrates, only that they restricted it to the exchange of *material* products. It also correctly represents the idea of Smith, for in B. I., c. 4, he explains the object of the first two Books of his work, which is the *constructive* part of it: he says they are "*to investigate the principles which regulate the exchangeable value of commodities;*" and McCulloch in his note to the first page of the work, says "This science might indeed be called the *Science of Values.*" Ricardo's work, however imperfect, is a treatise on Value. And this is so evident from the whole

body of Economic writers that we should have at once proceeded with the exposition of the science, if it had not been called in question by Mr. J. S. Mill: and as his work is so extensively read, we must examine his argument. At the commencement of Book III. on Exchange he says:—

"The subject on which we are now about to enter fills so important and conspicuous a position in Political Economy, that in the apprehension of some thinkers its boundaries confound themselves with those of the science itself. One eminent writer has proposed as a name for Political Economy "Catallactics," or the science of exchanges: by others it has been called the Science of Values. If these denominations had appeared to me *logically correct*, I must have placed the discussion of the elementary laws of value at the commencement of our inquiry instead of postponing it to the Third Part, and the possibility of so long deferring it is alone a sufficient proof that this view of Political Economy is too confined. It is true that in the preceding books we have not escaped the necessity of anticipating some small portion of the theory of Value, especially as to the value of labour and of land. It is, nevertheless, evident that, of the two great departments of Political Economy, the production of wealth and its distribution, the consideration of Value has to do with the latter alone; and with that only so far as competition, and not usage or custom, is the distributing agency. The conditions and laws of Production would be the same as they are if the arrangements of Society did not depend on Exchange, or did not admit of it. Even in the present system of industrial life, in which employments are minutely sub-divided, and all concerned in production depend for their remuneration on the price of a particular commodity, exchange is not the fundamental law of the distribution of the produce, no more than roads and carriages are the essential laws of motion, but merely a part of the machinery for effecting it. To confound these ideas seems to me not only a logical, but a practical blunder. It is a case of the error, too common in political economy, of not distinguishing between necessities arising from laws of nature and those created by social arrangements: an error which appears to me to be at all times producing two opposite mischiefs; on the one hand causing political economists to class the merely temporary truths of

their subject among its permanent laws; and on the other, leading many persons to mistake the permanent laws of Production (such as those on which the necessity is grounded of restraining population) for temporary accidents arising from the existing constitution of society—which those who would frame a new system of social arrangements are at liberty to disregard.

"In a state of society, however, in which the industrial system is entirely founded on purchase and sale, each individual, for the most part, living not on things in the production of which he himself bears a part, but on things obtained by a double exchange, a sale followed by a purchase—the question of Value is fundamental. Almost every speculation respecting the economical interests of a society thus constituted implies some theory of Value: the smallest error on that subject infects with corresponding error all our other conclusions; and anything vague or misty in our conception of it creates confusion and uncertainty in everything else."

Having thus laid Mr. Mill's arguments before our readers, we may now make some observations on them. What he can mean by saying that it is not *logically* correct to define Political Economy as the Science of Exchanges is wholly unintelligible to us. Surely it must be admitted that there is a science of exchanges, and why it should sin against the laws of Logic to call it Political Economy we are unable to perceive. As a matter of fact, all Economists since the foundation of the science in modern times have only considered Production with reference to an exchange.

Mr. Mill's meaning, however, we apprehend to be this:—That the *commoda vitæ* may be produced, distributed, and consumed by other means than by an exchange. And this is true. In former times such arrangements, no doubt, have been in force to a considerable extent. Formerly it is probable that in the Highlands of Scotland many families may have lived without ever buying or selling a single article in the whole course of their lives. All their food, clothing, and arms were made out of the produce of the estate. The house was made of the native wood and stones, all the labour performed by their own dependents. Now such a state of society may attain a certain degree of well-being, but it is clear that no such idea as *Value* could enter their minds.

It has been proved by experience, however, that it is necessary to have a certain peculiar state of moral sentiments in a society to have any such plan as this work with any degree of success; namely, that patriarchal state of feeling which existed in the deserts of Arabia, and which formerly existed in the Highlands of Scotland. For such a scheme it is necessary that the members of society should be under the strictest subordination, one to another, and all under a despotic chief; that they should be in a state of actual servitude, or one very closely bordering on it. Thus, in many monastic institutions, where the inferior members are all under the despotic government of the superior, such a scheme may exist, and the community enjoy a considerable amount of prosperity without any individual property. A similar state of things, on a larger scale, existed under the government of the Jesuits in Paraguay. Under their mild sway, it is generally believed that the natives enjoyed a considerable amount of real happiness, but although, in this instance despotic power does not seem to have been abused, or at least in a less degree than any other instance we know of, the natives were in reality little better than slaves. And this state of things could not last, it is now entirely abolished. But while it lasted, there was a considerable amount of production, distribution, and consumption of material produce without any exchanges, and, therefore, without any notion of Value.

Such a state of society is unnatural, and only compatible with a very low degree of civilization. The inevitable tendency of civilization is to equalize the rights of the various members of society, and all such plans have uniformly been found to fail where the members of the society were on an equality with each other. These plans of socialism, have with different modifications of detail, found many admirers in recent times. They have been advocated by dreaming philosophers, visionary enthusiasts, selfish rogues, and innocent saints. Repeated endeavours have been made to carry out some scheme of this nature under a great variety of differing conditions. But they have universally been found to fail; having been frequently started with the fairest auspices, they have always ended in misery and disaster. This would seem to prove that there is something contrary to the fundamental principles of human nature in them. There are no doubt several minute differences of detail among

the various schemes, but they all agree in this, that men should be *constrained* to work in union with others, and that the rewards meted out to the members of the society should be awarded by public authority. All these different schemes which have this principle in common, however they may differ in other respects, may be known by the generic name of SOCIALISM.

But Economists of all schools have from the first set their face against such a state of things. They have all held that individual property and the right of free exchange is the highest form of society, and that to which communities of a lower degree of civilization are tending. They began by expressly limiting the term "Wealth" to the products of the earth which were *exchanged*. Out of this exchange came Value and their Science. Now, what was there contrary to Logic in this? If they began by expressly declaring that their science had nothing to do with products which are consumed at home, but only with those which are brought into commerce, what is there illogical in calling it the science of Exchanges or of Values?

56. It was this very circumstance that made it seem desirable to Whately to adopt this name. He says, *Lectures, p.* 5.—"This limitation of the term Wealth to things contemplated as exchangeable, has been objected to on the ground that it makes the same thing to be wealth to one person and not to another. This very circumstance has always appeared to me the chief recommendation of such a use of the term; since the same thing *is* different to different persons. Even if we determine to employ the term Wealth and Value in reference to every kind of possession, we must still admit, that there is at least *some* very great distinction between the possession, for instance, of a collection of ornamental trees by a nursery-man, who cultivates them for sale, and by a gentleman, who has planted them to adorn his grounds.

"Since, however, the popular use of the term Wealth is not always very precise, and since it may require, just in the outset, some degree of attention to avoid being confused by contemplating the very same thing as being, or not being, an article of Wealth, according to circumstances, I think it for this reason more convenient on the whole to describe Political Economy as concerned universally and exclusively about *exchanges*."

So also Senior says:—"Again Colonel Torrens supposes a solitary family or a nation in which each person should consume only his own productions, or one in which there should be a community of goods, and urges as a *reductio ad absurdum*, that in these cases, though there might be an abundance of commodities, as there would be no exchanges, there would in our sense of the term be no wealth. The answer is, that for the purposes of Political Economy, there would be no wealth; for in fact in such a state of things, supposing it possible, the science of Political Economy would have no application. In such a state of society, Agriculture, Mechanics, or any other of the arts which are subservient to the production of the commodities which are with us the subjects of exchange might be studied, but the science of Political Economy would not exist."

These extracts are in exact accordance with the views of every Economist except Mr. Mill; in fact, he is the only one who has mixed up discussions on Socialism with a work on Political Economy, greatly, in our opinion, to the detriment of the scientific unity of the subject.

Not only was the specific declaration of the Physiocrates that by the Production, Distribution, and Consumption of Wealth, they meant the Commerce or Exchange of material products only, a great inducement to adopt the name of the Science of Exchanges, from the beginning, as Condillac did, but it has now indeed become a matter of imperative necessity to do so, since it has been enlarged so as to embrace all exchangeable quantities, and all exchanges. The former designation has now become quite unintelligible. It is just one of those cases which illustrate Mr. Mill's remarks in the *Introduction* to his *Logic*—"Accordingly in the case of so complex an aggregation of particulars as are comprehended in anything which can be called a science, the definition we set out with is seldom that which a more extensive knowledge of the subject shows to be the most appropriate. Until we know the particulars themselves, we cannot fix upon the most correct and compact mode of circumscribing them by a general description. * * So long as the sciences are imperfect the definitions must partake of their imperfections; and if the former are progressive, the latter ought to be so too."

In these remarks of Mr. Mill we entirely concur; and it is

for these very reasons that we adopt the definition of the science as being that of exchanges. The definition of it as the Production, Distribution, and Consumption of Wealth was not very intelligible when it was confined to the exchange of material products, but now that it is enlarged so as to embrace the theory of wages and the great commerce in debts, it is utterly unintelligible, and the definition of it as that of Exchanges is the only one which will fit the facts.

We have seen that Whately, who, as far as we know, was the first to call it by this name in this country, would have preferred to call it CATALLACTICS, in order to mark its nature more clearly. But the name by which a science is called is of very small importance; the real requisite is that its nature and objects should be clearly defined. There is no advantage to be gained by changing the name of a science which has once acquired a firm hold in popular usage, even though that name would not, perhaps, have been the best that might have been selected if the science were a new creation. There are few sciences which have not received a great extension or alteration of application of what the meaning of their names would suggest. Plato long enough ago laughed at the idea of calling the science which treated of the motion of the heavenly bodies geometry, yet geometry has retained its name from that day to this; and the French call a great analyst a great geometer. Trigonometry has long ago expanded beyond the measuring of triangles. Who could tell what Chemistry or Electricity meant by their names? In ancient times Music meant all the liberal arts; in modern times it is restricted to the modulation of sounds.

57. The name of Political Economy, or Economic Science, is so firmly rooted in the public mind, that no advantage would be got by changing it. And, furthermore, there is no reason for changing it, as the true character of the science is expressed in its very name. Many persons suppose that οἶκος in Greek means a house, and that an Economist is the master of a house. But οἶκος in Greek has a much more extensive meaning than that of a house: it means Property, Estate, or substance of every description. Thus Homer, Odyssey II., 238, says:—

κατέδουσι βιαίως
Οἶκον Ὀδυσσῆος, τὸν δ' οὐκέτι φασὶ νέεσθαι.

They forcibly devour the substance of Ulysses, who, they say, will never return.

Ökonomie = Verwaltung des (materiellen äußern) Vermögens, des Hausbedarfs, der Familien-Unterhalter.

So, Od. IV.—Ἐσθίεταί μοι οἶκος.
My property is being devoured.

So, Herodot. III., 53—καὶ οἶκον τοῦ πατρὸς διαφορηθέντα.
And the property of your father wasted away.

So, Herodot. VII., 224—τὸν οἶκον πάντα τὸν ἑωυτοῦ ἐπέδωκε.
He gave him back, too, the whole of his property.

So, Demosthenes, *against Aphobus*, 833, 24—οἶκοι * * διπλάσιοι καὶ τριπλάσιοι γεγόνασι.
Their fortunes have doubled and tripled.

So, Lysias, *against Eratosthenes*—τοὺς ἰδίους οἴκους οὗτοι * * ἐκτήσαντο.
These men increased their private fortunes.

And in the *Œconomicus* of Xenophon, Socrates expressly points out the distinction between οἶκος and οἰκία, the latter being the house only, while the former was all a man's property, or substance.

So, Ammonius says—οἶκος λέγεται ἡ πᾶσα οὐσία.
οἶκος means all property.

The word οἶκος was not only used by Greek writers to signify property of every description, but it was the technical term in Attic Law for the whole of a man's goods and chattels, or substance or estate, of every description. Hence, if such property as shares in commercial companies, the funds, or copyright, had existed at that time, they would all have been classed as οἶκος. Hence, Economics is an apt and fitting term to denote the Science which treats of the Exchanges of Property.

The only change we propose to make—if indeed it can be called a change—is this: The science is in popular language called both "Political Economy," and "Economic Science," or "Economics." Now the first term is too much associated with politics in the popular apprehension; and indeed included all government as used by the Physiocrates. J. B. Say was the first who restricted Political Economy to Wealth. Now it seems to us better to adopt that name which most clearly defines its nature and extent, and is most analogous to the names of similar sciences. Therefore we shall henceforth in this work, use the name of "Economics" exclusively, and discontinue that of Political Economy.

The definition of the Science which we offer is this:—

ECONOMICS *is the Science which treats of the Laws which govern the Relations of Exchangeable Quantities.*

This definition appears to state clearly and distinctly the nature and extent of the science, and to be free from the ambiguities connected with the words *Wealth* and *Value*; and M. Michel Chevalier has done us the honour to say that he considers it the best definition of the science that has yet been proposed.

58. We are happy to say that one of the latest and most distinguished American Economists takes exactly the same view of the subject. Professor Perry says—"Political Economy is the science of exchanges, or, what is exactly equivalent, the science of value."[1]—"So far as men satisfy their own wants by their own efforts without exchange, they stand outside the pale of this science. Under these circumstances the idea of Value could neither have birth or being, and, of course, there could be no such thing as a science of value."[2]—"The only one which seems to the present writer to be exactly right, is the definition given by Archbishop Whately, namely, the science of exchanges. This definition or its precise equivalent, the science of value, gives a perfectly definite field to Political Economy. Wherever value goes this science goes, and where value stops this science stops. Political Economy is the science of value, and of nothing else."[3]—"This definition is drawing to itself the most recent investigators in France, England, and America; and the scientific development of it has already put political economy into a new and better posture."[4]

59. Adopting, then, this conception of the Science of Economics which we have clearly shewn to be the mere generalization of the idea of the two preceding schools of Economists, and which must commend itself to every one accustomed to the study of other sciences, we have a distinct body of phenomena all based upon a single idea, and therefore fitted to form a great demonstrative science of the same rank as Mechanics or Optics,

[1] *Elements of Political Economy. By Arthur Latham Perry, Professor of Political Economy in Williams College, Mass.*, p. 1.

[2] *Ibid.*, p. 38. [3] *Ibid.*, p. 44. [4] *Ibid.*, p. 27.

or any other Physical Science. Another great body of particulars won from the vague, floating, and uncertain mass of knowledge, is fixed and circumscribed by a single conception, and formed into a great Inductive Science, whose investigations must be governed by the same general principles of Inductive Logic, as others are, and yet will be found to contribute its *quota* to Inductive Logic, bearing a general similarity to its sister sciences, and yet with peculiarities of its own,

Facies non omnibus una,
Nec diversa tamen; quales decet esse sororum.

And as quantities of such divers natures as men, cattle of all sorts, the wind, gravity, gunpowder, steam, &c., all come under the science of Mechanics, because they all exert *force*, whose effects can be measured numerically, and mechanics regards them simply as forces, wholly irrespective of any other qualities they may possess; so we see how quantities of such divers natures as money, houses, lands, debts, men, copyrights, cattle, the funds, the sciences, clothes, labour, and rights of all sorts, are all included in the science of Economics, because they all have the quality of exchangeability, and Economics regards them in respect of this quality alone, wholly irrespective of any other qualities they may possess. Thus we see the true field of the Science: an Economist is one who reasons about the Laws of Value. It has often happened in many countries that in cases of a great scarcity of corn, the government has imported corn with the benevolent intention of lowering its price, and making it more plentiful. But the effect has usually been to make it more scarce and dear. This shews that they did not correctly understand the laws of Economics. And this also shews how it is a Physical Moral Science, because its laws are obtained by observing the *mores*—the ἦθη—of men, and its effects are shewn by the numerical amounts in which the several quantities will exchange with each other.

It is also seen what questions are beyond its limits. Nothing can be more vague and ill defined than the popular notions of what is, and what is not an Economic question. Thus, when the Legislature recently passed an act to give tenants in Ireland certain rights which they had not before, many of its opponents set up a cry that this was against the laws of Political Economy. The answer is that it was not a question of Economics at all,

but of Morality. It was a pure question of Morality and Justice whether the tenants should have these rights or not; it did not become a question of Economics until these rights were brought into commerce, or exchanged.

The pure science of Economics is therefore capable of rigorous mathematical demonstration, and it is better to appropriate the name to a subject which is of universal application. But there are several subjects closely allied to it which we shall have to consider, such as Taxation, Poor Laws, Colonization, Population, &c., which we may call mixed Economics and Morals. The sum raised by taxation is the sum paid by the community for certain services done to the State. But *how* that sum should be raised, and *who* should pay it, is very much a question of Morals—of opinion and argument—and not a question of demonstration. But so far as Taxation affects the values of quantities, it is a question of Economics. It is also a question of Morals whether there should be a Poor Law or not; but how Poor rates affect the Value of Labour, is a question of Economics. And so on of the other cognate subjects. So the questions of inheritance and bequest are, properly speaking, social or moral subjects; all these are, in many respects, uncertain and variable, and greatly dependent on particular circumstances. It is not possible to arrive at absolute, universal, demonstrative truth in them.

60. Hence we see the fundamental distinction between a Socialistic and an Economic state of society. A Socialistic state of society is expressly devised for the purpose of abolishing private property and free exchanges, and thus extinguishing the notion of Value. An Economic state of society is where the right of private property exists, and where free exchanges are allowed, and the very object of Economic Science is to discover the laws which govern these exchanges. It is so notorious that the science of Political Economy is founded on the conception of private property and free exchanges that it is well known that the Socialists have declared a most deadly war against it, and when they got the upper hand for a short time in Paris the first thing they did was to abolish all the chairs of Political Economy in the country.

61. From the preceding remarks, it may appear that the science we are about to treat of is insignificant. It has nothing to boast so striking to the imagination as the triumphs of the astronomer or the chemist. But it is not too much to say that it is more intimately connected with human happiness and well-being than all other sciences put together. The astronomer's field of fame lies in the cold regions of space. We may be amazed, almost awe-struck, with the powers of the human intellect, which by a few mysterious symbols on paper, detected the existence, and fixed the position, of an undiscovered planet. These truly are marvellous triumphs. But we are not aware that they have had any influence on human affairs. Beyond the satisfaction of philosophic truth, we are not aware that it matters anything to the prosperity of nations, whether the Ptolemaic or the Newtonian theory, whether the Emission or the Wave theory be the victor. The astronomer may dazzle the intellect, but in his lone icy grandeur he is far beyond the reach of human sympathy. But the illustrious man who discovered the palpable truth, *that in commerce both sides must gain*, operated a revolution in public opinion, and in national policy which directly affects the happiness of every human being, and for ever removed a perennial source of war from the world. Economics is essentially a science of human interest; it performs among sciences what the Roman poet, in those world-famous lines, asserted to be the peculiar function of his countrymen among nations:—

> Excudent alii spirantia mollius æra,
> Credo equidem; vivos ducent de marmore voltus;
> Orabunt causas melius, cœlique meatus
> Describent radio, et surgentia sidera dicent;
> Tu regere imperio populos, Romane, memento;
> Hæ tibi erunt artes; pacisque imponere morem,
> Parcere subjectis, et debellare superbos.

If war is the greatest curse of mankind, Economics is its most powerful antagonist. If tyrannical monopolies in trade are among the greatest social curses, Economics is their most effectual destroyer. When its consequences are clearly apprehended and its doctrines have won their way to universal acceptance, they will go far to convert the world from a slaughter-house and a shambles into a garden of plenty and abundance. What a humiliation for the pride of the human intellect to discover that for six generations the wisest states-

men, the most experienced merchants, and the most enlightened nations were enthralled by a phrase, under whose influence every nation was armed against every other, and the most powerful states brought to ruin, and misery and desolation visited upon every fireside in Europe—and when true Economics examined this expression it was found to be a chimæra and a delusion! Amid this universal insanity and desolation the Genius of Economics rose with healing on its wings to minister the only remedy which could restore prosperity to the world. One unhappy phrase was the pregnant source of all this woe, the magic of another phrase alone assuaged it. There is not a single false doctrine in Economics which has not been the cause of immense calamities to mankind. What terrible sufferings have been caused by false theories of Credit! Erroneous notions on Value have ruined the prosperity of many trades, broken up and scattered thousands and thousands of happy homes, and brought their inmates to the gaol, the workhouse, and the grave. No doubt the progress of sound ideas is slow; centuries, perhaps, may elapse before they produce their full effects. But they have now an irrevocable hold on the opinions of mankind. The laws of Economics are now demonstratively settled. It was not uncertain caprice that made England adopt the principles of Free Trade, but scientific truth. The progress may be slow, but it is irreversible; no one dreams that England will ever again go back to her former errors. Scientific reasoning and practical success equally combine to insure the ultimate triumph of these principles. True Economics is the surest source of the prosperity of nations, and the most powerful agent to subdue barbarism, and to humanise mankind. More than all other causes put together, it will help to accelerate the period when the roar of the cannon shall be heard no more, and the sabre shall rust in its scabbard. When it is clearly seen that the interests of all mankind are bound up in peace, and that every nation is interested in the prosperity of its neighbours, and that the misfortunes of one nation are injurious to the interests of every other, then it may be hoped that the war clouds will cease to lower on the horizon.

Placatumque nitet diffuso lumine cœlum.

CHAPTER IV.

ON THE GENERAL CONCEPTIONS OF ECONOMICS.

WEALTH—PROPERTY—VALUE—MONEY, CURRENCY, CREDIT, CIRCULATING MEDIUM, CIRCULATION—PRICE, DISCOUNT, INTEREST—RATE OF INTEREST, RATE OF PROFIT—SECURITIES FOR MONEY AND CONVERTIBLE SECURITIES—CAPITAL, FIXED AND FLOATING—PRODUCTION AND CONSUMPTION, SUPPLY AND DEMAND—CERTAIN PRELIMINARY PROPOSITIONS.

1. In the preceding chapter we have given an account of the historical progress of Ideas as to the nature and objects of Economic Science: and we found an absolute unanimity of agreement among ancient and modern writers that the single general quality of things which renders them Wealth is exchangeability. If, then, it be agreed that Economics is the science of things so far as regards their being Wealth, it can be nothing else than the science of them so far as regards their Exchangeable Relations.

Having thus determined the general conception of the science itself, our next duty is to fix its general conceptions. And in ascertaining these, we shall follow exactly the same general course as we did with respect to the science itself. We shall examine the definitions given by the principal writers, and search for that single general idea only, which each general conception must involve, in accordance with the canons laid down already.

Most of the definitions in common use are involved and complex, and a combination of several ideas. Our duty will be to resolve these into their separate ideas, and by means of Inductive Logic discover which is the single true general idea, and eliminate all the other accidental and intrusive ideas. As Beccaria observed long ago, the only way to arrive at grand and universal principles and to discover the true relations of things is to decompose by analysis ill-combined ideas.[1]

[1] *Del disordine delle Monete nello Stato di Milano.*

The early stages of every physical science are full of similar discussions, and it is because their cultivators saw the absolute necessity of such a course that the sciences have reached such a state of perfection, and it is simply because the cultivators of Economics have systematically neglected this indispensable labour that Economics at the present day presents such a melancholy aspect, when there are scarcely two Economists who agree on any point whatever in the science, and the works of the highest reputation are filled with the most extraordinary self-contradictions.

We wish once for all to say that it is from no love of logomachy or controversy that we enter upon these discussions, but as a matter of absolute necessity for the advancement of scientific truth. If we had followed our own wishes only, we should have contented ourselves with a simple exposition of our own conceptions, and left them to make their own way. But when so many and divers ones are used in works of extensive circulation we thought that we could not avoid the necessity of examining them and pointing out their imperfections.

The performance of this may seem to savour too much of metaphysics, but it is of the deepest practical importance. Speaking of the definition of Wealth, Whately says[1]—"It were well if the ambiguities of this word had done no more than puzzle philosophers. One of them gave birth to the Mercantile System * * The results have been fraud, punishment, and poverty at home, and discord and war without. * * It has for centuries done more, and perhaps for centuries to come will do more, to retard the improvement of Europe than all other causes put together." No well-informed person can deny the truth of this, and therefore it may probably be admitted that it is worth while to give a little trouble to fix the meaning of the word.

Most persons engaged in practical business are morbidly averse to such discussions. But their fortunes may depend upon them. The Bank Act of 1844, one of the most important practical acts in the Statute book, is expressely founded on a peculiar definition of the word Currency, and is designed for the purpose of carrying into effect a particular theory of Currency. At certain periods of commercial crisis, the whole fabric of

[1] *Appendix to Logic.*

British commerce is menaced with ruin on account of a peculiar definition of currency, and a particular theory of currency.

Now the views of the persons who differ on the meaning of the word Currency, on which such important consequences depend, are well known. They can be stated in a very short compass indeed. And it is perfectly easy for any properly qualified person to pronounce an absolute judgment upon them. Any commercial lawyer, and any Court of Common Law, on hearing a statement of the views of each party, would decide in a minute which was right. The Laws of Inductive Logic point out with certainty which side is right. Is it not worth while then to devote a little time and trouble to determine a point of such enormous practical importance? and which will be a constant source of annoyance and worry until it is settled? In the course of this work it will be shewn what immense practical consequences depend upon the meaning of the other definitions in the science.

It is indeed sometimes supposed that as the general terms of Economics are taken from common discourse, it is not possible to give them as precise and definite a meaning as the technical terms in Physical Science. But this is a great error. In almost all the Physical Sciences a considerable number of the technical terms are taken from common discourse, but men of science saw the necessity of selecting, defining, and fixing the meaning of the word to be used in that science. Many words are used in several different sciences, but with a different, distinct, and technical meaning in each science. There is, therefore, nothing peculiar in the fact that the technical terms in Economics are taken from common discourse, and there is no peculiar difficulty in defining and fixing them in a sense suitable for the science of Economics. The sole condition is that the same philosophical methods of selecting the signification they are to bear, be followed as have already been employed in other sciences.

The Physiocrate Definition of Wealth.

2. The Physiocrates held that all things necessary for the preservation and comfort of the human race are products of the earth. Those products which the producers consumed themselves they called *biens*, but the products which the producers

exchanged, they called WEALTH. Thus, Baudeau says [1]—"Useful and agreeable objects proper for our enjoyment, are called *(biens)* goods, because they conduce to the preservation, the propagation, and the well-being of mankind on the earth.

"But sometimes these goods are not wealth, because they cannot be exchanged for other goods, or be used to procure other enjoyments. The products of nature, or the works of art, the most necessary or the most agreeable, cease to be WEALTH when you lose the power of exchanging them, and of procuring other enjoyments by means of this exchange. One hundred thousand feet of the most beautiful oak in the world, would not be *Wealth* to you in the interior of North America, where you could not divest yourself of its possession by means of an exchange.

"The title of *Wealth*, therefore, supposes two things: first, useful qualities which renders the objects useful and agreeable, and fit for an enjoyment, which renders them (*biens*) goods; secondly, the possibility of exchanging them, which enables these goods to procure you others, which constitutes them WEALTH.

"This possibility of exchange supposes that there are other goods for which they can be exchanged."

So Quesnay says [2]—"We must distinguish between goods (*biens*) which have value in use, and not value in exchange, and WEALTH which has both value in use and value in exchange. For instance, the savages in Louisiana enjoy many (*biens*) goods, such as wood, game, the fruits of the earth, &c., which are not WEALTH, because they have no value in exchange. But since some kinds of commerce have been established between them and the French, the English, and the Spaniards, &c., part of these *biens* have acquired a value in exchange, and are become Wealth."

So also Le Trosne says [3]—"Man is surrounded by wants which are renewed everyday. * * Whatever they are, it is only from the earth that he can draw the means of supplying them. This physical truth that the earth is the source of all *biens*, is so self-evident, that no one can doubt it. * * But

[1] *Introduction à la Philosophie Economique, Ch. I.*, § 5.
Maximes Générales du Gouvernement. Max. 18. *Note.*
De l'interest sociale, Ch. I., § 1, 2, 3, 4.

it is not sufficient to estimate products by their useful qualities, we must consider the property they have of being exchanged against each other. * * Products acquire therefore in a state of society a new quality, which springs from the communication of men with each other: this quality is *Value*, which makes the products become *Wealth*, and so there is nothing superfluous, because the excess becomes the means to obtain what one wants.

"Value consists in the relation of exchange, which exists between such and such products. * * In a word, the quality of *Wealth* supposes not only a useful property, but also the possibility of exchange, because value is nothing but the relation of exchange. The earth in truth only gives products, which have the physical qualities to satisfy our wants: it is exchange which gives them *Value*; a quality relative and accidental. But as it is the products themselves which are the sole matter of exchange, it follows that we can say with truth that it is the earth which produces not only all *biens*, but all *Wealth*."[1]

Thus we see that the Physiocrate Definition of Wealth was perfectly clear and intelligible: it was the products of the Earth which are brought into commerce, or which are exchanged. It was also their fundamental dogma that the Earth is the only source of Wealth, because as was repeated by a multitude of writers, man can create nothing, and Nothing can come out of Nothing.

On Adam Smith's Definition of Wealth.

3. Smith entitles his work, *An Inquiry into the Nature and Causes of the Wealth of Nations*, but he does not commence by giving any clear definition of what he means by Wealth.

There was, however, an expression which was in very common use by the Economists of all countries at this period which he seems to have adopted. He says in the introduction—"The real wealth, the annual produce of the land and labour of the Society," and from the number of times this phrase is repeated throughout the work, we shall probably not be far wrong, if we consider that as the nearest idea of what he meant.

Now, on examining this phrase it is very evident that it is

[1] *De l'interest sociale*, § 10.

ambiguous. It is not clear whether he means the annual produce of the land alone, and the produce of labour alone, or the produce of land and labour combined. It is probable he meant the latter.

Whichever way the expression be interpreted, it is manifest that it is far too wide; because if it be laid down absolutely that the produce of land and labour, either separately or combined, is wealth, then every useless product of the earth is wealth, as well as the most useful, the tares as well as the wheat. So also every useless work done would be wealth. Thus if a number of labourers were to raise a mound on Salisbury Plain or to build a palace in the middle of the Sahara, that would be wealth: so also children's mud pies would be wealth. In fact the error of the definition in respect of excess, is so manifest that it requires no further illustration or arguments to shew it.

On the other hand the definition is far too narrow, for Smith himself acknowledges things to be wealth, which are certainly not the "annual produce of land and labour." Thus in B. II. c. 1, under the head of Fixed Capital he enumerates "The acquired and useful abilities of all the inhabitants, or members of the society. The acquisition of such talents, by the maintenance of the acquirer during his education, study, or apprenticeship always costs a real expense, which is a capital fixed and realised as it were in his person. These talents as they make a part of his fortune, so do they likewise of that of the society to which he belongs." Thus we see that Smith expressly includes talents and abilities as wealth; or as they are frequently called by more recent writers moral or immaterial wealth. Now intellectual qualities are certainly not the produce of land, nor are they produce of land and labour combined. It may be said that acquired abilities are the produce of labour, but certainly natural abilities are not the produce of labour. And thus Smith's definition is shewn to be too narrow by his own book.

There are besides many other things which every one will admit to be "wealth" which are clearly not the "annual produce of land and labour."

Thus the land itself upon which a city is built is wealth to the possessor of it. But the land itself is not the "annual produce of land and labour."

Timber trees which never had any labour bestowed upon them

at all, become of great value when a country becomes peopled. These timber trees are certainly not the "produce of land and labour," nor can cattle be properly called the "produce of land and labour." It is evidently quite incorrect to say that cattle and trees, and domestic animals of all sorts are the "produce of land and labour." Labour may be employed in tending animals: but certainly cattle and trees are not the *produce* of labour.

Hence besides certain material-products admitted to be wealth which may be correctly described as the "annual produce of land and labour," we find large quantities of material products which are manifestly wealth, which cannot be correctly described as the "annual produce of land and labour," and we have observed that there are two distinct kinds of wealth, material or corporeal, and immaterial.

But Smith acknowledges a *third* species of Wealth of a different nature from the other two. In B. II., c. 2.: "On Metallic and Paper Money," he says that if to a circulating specie of one million of specie, banks and bankers add a million of bank notes, reserving two hundred thousand in specie to meet demands, "there would remain, therefore, in circulation eight hundred thousand pounds in gold and silver, and a million of bank notes, or eighteen hundred thousand pounds of *paper* and money together." And under the head of capital he expressly includes paper currency of all sorts, Notes, Bills, &c. Now, we see by these passages, that Smith fully recognizes the fact that these bank notes are Exchangeable Property. He puts the million of notes on exactly the same footing as gold and silver. He admits that bankers by issuing this million of notes *augment* the mass of exchangeable property by that amount. Now, what are these bank notes? They are simply so many circulating debts. They are a species of property which is also called CREDIT, whose nature we shall have to investigate at great length hereafter.

These circulating debts are the Negative Economic Quantities, which we spoke of in the last chapter. All that we wish to observe here is that Smith puts paper money exactly on the same footing as so much money, and he admits that the creation of these debts is an *increase* of the mass of other exchangeable property.

Now this Credit, or Debt, is certainly not the "annual produce of land and labour."

Hence we see that Smith classes services, or labour, and credit under the title of Wealth, which the Physiocrates did not, and thus he completely overthrew the Physiocrate dogma that the Earth is the source of all wealth.

This third species of wealth includes many other kinds of enormous magnitude, which it will be more convenient to enumerate hereafter.

Hence we see that Smith's definition of wealth—assuming that we have interpreted him correctly—entirely fails; it is at once far too wide and far too narrow. It *includes* a mass of things which can by no possibility be called wealth; and it *excludes* the immensely greater portion of what Smith himself admits to be wealth.

Such a definition of Wealth is open to another serious objection, which is patent from his own work. For if it be laid down absolutely that the "produce of land and labour" is wealth, it clearly follows that if anything be produced by land and labour, it must be wealth at all times, and in all places: that what is once wealth must always be wealth. But universal experience shews that such a doctrine is utterly erroneous.

But Smith after saying in innumerable places that the "annual produce of land and labour" is wealth, says, B. II., c. 2.: "A guinea [which may be called the produce of land and labour] may be considered as a bill for a certain quantity of necessaries and conveniences upon all the tradesmen in the neighbourhood. The revenue of the person to whom it is paid, does not so properly consist in the piece of gold, as in what he can get for it, or in what he can exchange it for. *If it could be exchanged for nothing, it would, like a bill upon a bankrupt, be of no more value than the most useless piece of paper.*"

We thus see the incongruity of Smith's conceptions of the very fundamental word in the whole science. He first tells us in a multitude of places that wealth is the "annual produce of land and labour," then afterwards he says that unless it is exchangeable it is not wealth. So far, however, he makes Labour and Materiality necessary to wealth. But he then classes intellectual qualities as wealth, in which there is certainly no Materiality, though they may, in some cases, be connected with Labour. And after that, he classes Credit as wealth in which there is neither Materiality nor Labour. Now, it is mani-

fest that the two fundamental conceptions, "annual produce of land and labour," and "exchangeability," do not coincide; for we may have the produce of land and labour which is not exchangeable, and there are stupendous masses of exchangeable property—nay, in this commercial country enormously the greater portion—which is in no way whatever the produce of land and labour.

It would be far too tedious to investigate separately every writer's definition of Wealth. To investigate Smith's fully was due to the reputation of the *Wealth of Nations*. But the real points in debate are whether such things as services, labour, and the sciences, and also such properties as Credit, the Funds, Copyrights, and similar property are to be included under the title of Wealth. The better way will be to examine the opinions of some of the principal writers on each of these points separately and then to state the reasons which decide the question.

4. The earliest definition of Wealth that we are aware of is that given by Aristotle, *Nicomac. Ethics* B. V., c. 1:—

Χρήματα δὲ λέγομεν πάντα, ὅσων ἡ ἀξία νομίσματι μετρεῖται.

And we call Wealth everything whose value is measured by money.

Or rather we may say everything which is exchangeable, money itself being an exchangeable quantity.

Now it is evident that the generality of this definition includes both of the two latter species of quantities we have mentioned above: because a person's labour or services may be measured in money; and also Debts, Copyrights, the Funds, and all that class of Property, may be bought and sold for money.

On Immaterial Wealth.

5. The subject of Wealth is discussed in one of the earliest Economic Treatises in existence. It is a remarkable dialogue named the Eryxias. It is often printed along with Plato, and is one of the three usually attributed to Æschines Socraticus, which, however are all declared to be spurious by critics. The learned Master of Trinity College, Cambridge, thinks that this dialogue may not improbably belong to the early Peripatetic

period. This dialogue is but very little known, and as it discusses a question which is at the very root of Economics, we shall give a pretty full extract from it.

The scene is laid on the return of the ambassadors to Sicily, who, discoursing on the subject with Socrates, mention that they had seen the wealthiest man in Sicily. This leads Socrates to discuss the nature of Wealth. After some preliminary discussion, Socrates says, § 23 :—

"It now remains to be considered what wealth itself is; for, unless you know this first, you will not be able to agree whether it is a good or an evil. And I am ready to look into the matter with you as far as I am able. Let him, therefore, who says that wealth is a good thing, say what he thinks about it.

"*Eryx.*—But I do not, Socrates, define wealth in any different way from what others do. For I think that to be wealthy means to possess many good things (χρήματα); and I think that Critias, here, does not think that wealth is anything else.

"*Socr.*—And still it remains to be considered what are goods (χρήματα), that we may not again hereafter seem to differ on the point. For instance, the Carthaginians use such money (νόμισμα) as this: in a small bit of leather is enclosed something as large as a stater: but what the thing is, which is wrapped up, nobody knows except the makers. Then, when it is sealed up, they use it as money. And he who possesses the most of this, seems to possess the most good things (χρήματα) and to be the wealthiest person. But if any one among us possessed the greatest quantity of this, he would not seem to be any richer than if he possessed so many pebbles from the hill. And at Lacedæmon a piece of iron is used as money, and this, too, useless iron. And he who possesses a great quantity of this iron is esteemed wealthy, but anywhere else its possession is worth nothing. And in Æthiopia they use carved pebbles, which a Laconian could make no use of. But among the nomade Scythians, if any one possessed the house of Polytion, he would not be thought any the more wealthy than if any one with us possessed Lycabettus. It is plain, therefore, that neither of these things can be wealth (κτήματα), if those who possess them are none the richer on that account. But there are some persons to whom each of these things is wealth (χρήματα), and those who possess them are wealthy; and to others they are

not wealth, and they are not richer for possessing them. Just as the same things are not good or base to all persons, but different to different persons. But if we wish to consider why, among the Scythians, a house is not wealth, but it is to us; or why skins are wealth among the Carthaginians, but not with us; or why iron is wealth to the Lacedæmonians, and not to us; shall we not best discover the reason thus? For instance, if any one at Athens happened to possess a thousand talents' weight of the stones in the market place, of which we make no use, would he be thought wealthier on that account?

"*Eryx.*—I think not.

"*Socr.*—But if he possessed a thousand talents of the stone Lychnite, should we say that he was very wealthy?

"*Eryx.*—Certainly.

"*Socr.*—Is it not for this reason, that the one is useful to us, and the other useless?

"*Eryx.*—Certainly.

"*Socr.*—Therefore that is the reason why houses are not wealth among the Scythians, because they have no need of a house. Nor would any Scythian prefer to have a house, however beautiful it might be, rather than a sheepskin cloak, because the latter is useful to him, and the other useless. So, again, we do not think that the Carthaginian money is wealth to us, for we can buy nothing that we want with it, as we can with silver, so that it is useless to us.

"*Eryx.*—So it seems.

"*Socr.*—Whatever therefore is useful to us is wealth (χρήματα); whatever is not useful to us is not wealth.

"*Eryx.*—How is this, Socrates? Is there not something we use in conversing with one another, and in injuring each other, and many other things? Are these things wealth to us? And yet they seem to be useful. Not even yet has it seemed clear to us what wealth is. For nearly all of us agree that to be wealth, it must be something useful: but what kind of useful things? Since it is not every kind of useful thing that is wealth.

"*Socr.*—Come, then, shall we not rather discover what we are seeking, if we investigate the question in this way:—What is that for which we use wealth, and for what object has the possession of wealth been discovered, as drugs to drive away diseases? Perhaps this may make it clearer. It appears, there

fore, necessary for a thing to be wealth, that it must also be useful. And of useful things, there is a certain species which we call wealth. It remains to inquire for what kind of use are the things called wealth to be used; for all things are to be called useful, which we use for any purpose. As all things which have life, are living beings. But there is a certain race of living beings which we call man. But if any one were to ask us what is that thing, which if we were free from, we should not require the physician's art, or its instruments, should we be able to say if diseases should leave our bodies, or did not at all exist, or if existing, were immediately driven away? It is clear that medicine is the science which is useful to remove diseases. Again, if any one should ask us what is that thing which, if it were removed, we should have no need of wealth, should we be able to say? If not, let us look into the matter again. Suppose a man could live without food or drink, and was neither hungry nor thirsty, is there any reason why he should want these things, or silver, or anything else, with which to purchase them?

"*Eryx.*—I think not.

"*Socr.*—And is this not true of other things? If we did not require for the service of the body what we do want now, both heat and cold sometimes, and other things besides, which the body requires, those things which we now call wealth would not be wanted by us. This would be so, at least, if no one wanted any of those things, for the sake of which we desire to have wealth: so that we had sufficient of what we daily require for the desires and wants of the body. If, then, the use of wealth is to minister to the wants of the body, if these wants were taken away, we should have no use for wealth, perhaps, indeed, there would be no such thing as wealth at all.

"*Eryx.*—So it seems.

"*Socr.*—It appears, then, to us, it seems, that those things which are useful to this purpose are wealth. But what are these kind of things? Can we say that the same thing is useful for the same purpose at one time, and useless at another?

"*Eryx.*—I should not say so. But if we want the same thing for the same purpose, it seems to me to be useful. And if not so, not so.

"*Socr.*—Therefore if we could cast a brazen statue without

fire, we should not want fire for this purpose. And if we did not require it, it would be of no use to us. And the same argument holds good with regard to other things.

"*Eryx.*—It seems so.

"*Socr.*—Therefore of those things which any thing else can be done without, none appear to be useful, for this purpose at least.

"*Eryx.*—Certainly not.

"*Socr.*—If, therefore, we should be able without silver and gold, and similar things, (which we do not use for the purposes of the body like meat and drink, and clothes, and bedding, and houses,) to satisfy the wants of the body, so as no longer to want them, gold and silver and similar things do not appear to us to be wealth, so far as regards this at least, if we could do without them.

"*Eryx.*—They would not.

"*Socr.*—These things would certainly not appear to us to be Wealth, if they were not useful: but those things would be wealth by means of which we could buy what is useful to us.

"*Eryx.*—O, Socrates! I could never be persuaded to believe that gold and silver, and such things, are not wealth. For I am firmly persuaded that the things which are useless to us are not wealth, and that what is the most useful to us of all things is wealth. Surely it cannot be said that these things are not useful for our existence, if we can buy necessaries with them.

"*Socr.*—Come, then, how shall we settle this matter? Are there certain persons who teach Music, or Grammar, or some other science, who in return for this obtain what is necessary for them, as a remuneration for this instruction?

"*Eryx.*—Certainly there are.

"*Socr.*—Therefore these men can purchase necessaries for themselves with this instruction, exchanging some of it for these things, as we do gold and silver.

"*Eryx.*—Certainly they can.

"*Socr.*—If, then, they gain by this means what they require for their living, this thing would be useful towards their subsistence. For we have already said that silver is useful for the purpose of purchasing the necessaries of life.

"*Eryx.*—It is so.

"*Socr.*—Therefore if these sciences are useful for this pur-

pose, do not they seem to us to be WEALTH, for the very same reason that gold and silver are? And it is plain that those who possess them are richer, &c."

This dialogue is certainly one of the earliest known to exist on the subject, and it contains some of the fundamental conceptions of Economics. The author saw clearly that value consists in exchangeability, and that all value is local, that is to say that a thing may be wealth in one place, and among some people, and not wealth in other places, and among other people: and consequently that whatever possesses the quality of exchangeability is wealth, whatever its nature be, and however small the sphere of its exchangeability may be. The writer also clearly demonstrates that each of the professions and sciences is a great estate, which produces utilities which are wealth to the possessors of them. That intellectual wealth is in fact part of the national capital. This doctrine is, as we have seen, admitted by Smith, but it quite overthrows what appears to be his fundamental definition of wealth.

6. J. B. Say was the first writer in modern times who brought this doctrine forward with due prominence. He says[1]:—

"He who has acquired a talent at the price of an annual sacrifice, enjoys an accumulated capital, and this wealth, although immaterial, is nevertheless so little fictitious that he daily exchanges the exercise of his art for gold and silver." In the Epitome at the end of the *Traité* he defines an Immaterial Product to be a utility, which is not fixed in any material substance, such as the services of a physician, a lawyer, a civil or military functionary, and, indeed, we may say labour of all sorts, which expires in the use.

This doctrine Say subsequently repeats in several places. Thus he says:[2]—"Since it has been proved that immaterial property, such as talents, and acquired personal abilities, form an integral part of social wealth."

So again:[3]—"You see, gentlemen, that utility, under whatever form it presents itself, is the source of the value of things; and what may surprise you is, that this utility can be created, can have value, and become the subject of an exchange, without being incorporated in any material object. A manufacturer of

[1] *Traité, p.* 34. [2] *Cours d'Economie politique, vol. I., p.* 4.
[3] *Cours, Part I., c.* 5.

glass places value in sand; a manufacturer of cloth places it in wool: but a physician sells us a utility without being incorporated in any matter. This utility is truly the fruit of his studies, his labour, and his capital. We buy it in buying his opinion. It is a real product, but immaterial."—"The science, the talent of a physician, a surgeon, a professor, are not they acquired capital yielding a revenue? The oral instruction they have received are yet not attached to any material product."

In his synoptical table[1] of what constitutes the productive funds of a nation, he expressly enumerates intellectual and industrial faculties of all sorts; and he treats immaterial products and services as vendible commodities, in all respects on the same footing as material products. So also:[2]—"We must include under capital many objects which have a value, although they are not material. The practice of an advocate, a notary, the custom of a shop, the reputation of a sign-board, the title of a periodical work, are undoubtedly property (*biens*): they may be bought and sold, and be the subject of a contract; and they are also capital, because they are the fruit of accumulated labour. An advocate, by the wisdom of his advice, by his industry and other qualities, has made the public have a good opinion of his chambers: this good opinion gives him the right to higher fees. This excess of profit is the revenue of a capital entitled *reputation*, and this capital is the fruit of the care and pains the advocate has taken during many years."

It is true that Say has contradicted himself in other passages in the most extraordinary manner, which has given rise to all the confusion he has caused on the subject of Credit. But we must reserve the examination of this until a future chapter. All we wish to shew here is that Say includes intellectual qualities of all sorts under the title of Wealth.

7. The last writer, we think it necessary to cite, is Senior. He says:[3]—"If the question whether personal qualities are articles of wealth had been proposed in classical times, it would have appeared too clear for discussion. In Athens every one would have replied that they, in fact, constituted the whole value of an ἔμψυχον ὄργανον. The only differences in this

[1] *Cours, Part I., c.* 8. [2] *Cours, Part IV., c.* 5.
[3] *Political Economy, p.* 10.

respect between a freeman and a slave are, first, that the freeman sells *himself*, and only for a period, and to a certain extent; the slave may be sold by others and absolutely; and, secondly, that the personal qualities of the slave are a portion of the wealth of his master; those of the freeman, so far as they can be made the subjects of exchange, are a part of his own wealth. They perish indeed by his death, and may be impaired or destroyed by disease, or rendered valueless by any changes in the customs of the country, which shall destroy the demand for his services; but subject to these contingencies they are wealth, and wealth of the most valuable kind. The amount of revenue derived from their exercise in England far exceeds the rental of all the lands in Great Britain."

So also[1]—"Even in our present state of civilization, which, high as it appears by comparison, is far short of what may easily be conceived, or even of what may confidently be expected, the INTELLECTUAL and MORAL CAPITAL of Great Britain far exceeds all her material capital, not only in importance but even in productiveness. The families that receive mere wages probably do not form a fourth of the community; and the comparatively larger amount of the wages even of these, is principally owing to the capital and skill with which their efforts are assisted and directed by the more educated members of the society. These who receive mere rent, even using that word in its largest sense, are still fewer: and the amount of rent, like that of wages, principally depends on the knowledge by which the gifts of nature are directed and employed. The bulk of the national revenue is profit; and of that profit the portion which is mere interest on material capital, probably does not amount to one-third. The rest is the result of personal capital, or in other words of education.

"It is not on the accidents of the soil, or climate, or the existing accumulation of the material instruments of production, but on the quantity and the diffusion of this immaterial capital, that the wealth of a country depends. The climate, the soil, and the situation of Ireland have been described as superior, and certainly are not much inferior to our own. Her poverty has been attributed to the want of material capital; but were Ireland now to exchange her native population for seven millions of our

[1] *Political Economy*, *p.* 134.

English north countrymen, they would quickly create the capital that is wanted. And were England, North of Trent, to be peopled exclusively by a million of families from the west of Ireland, Lancashire and Yorkshire would still more rapidly resemble Connaught. Ireland is physically poor, because she is morally and intellectually poor. And while she continues uneducated, while the ignorance and violence of her population render persons and property insecure, and prevent the accumulation, and prohibit the introduction of capital, legislative measures, intended solely and directly to relieve her poverty, may not indeed be ineffectual, for they may aggravate the disease, the symptoms of which they are meant to palliate, but undoubtedly will be productive of no permanent benefit. *Knowledge has been called power—it is far more certainly* WEALTH. Asia Minor, Syria, Egypt, and the northern coast of Africa, were once among the richest, and are now among the most miserable countries in the world, simply because they have fallen into the hands of a people without a sufficiency of the immaterial sources of wealth to keep up the material ones."

8. The question, indeed, whether services are wealth appears to us to be so clear that we can scarcely understand how any difficulty could be felt about it. But nevertheless difficulties have been felt and objections made to including such immaterial products under the title of wealth, and therefore it is necessary to cite the opinions we have done, and afterwards to examine the objections made against them.

Under this division comes the whole of labour of all sorts, and all persons earning an income by professions and employments of all sorts. It is evident that they give a certain amount of exertion, and receive in return for it payment. Their services, therefore, are of the same value to them as any material product. They are the subjects of taxation, and they contribute to the national revenue, just as much as if they were farmers or merchants.

Smith says that a man is rich or poor according as he can command the necessaries, conveniences, and *enjoyments* of life. It is evident, therefore, that those who can supply those "enjoyments" and are paid for it, are producers of wealth as much as the producers of material products.

Of Incorporeal Property, or Wealth.

9. We now come to the last species of Exchangeable Quantities, of which Bank Notes and Bills of Exchange, included by Smith under the title of Capital, are the type—namely, abstract rights, wholly separated from any material substance. Now Property (*Res*) in Roman Law, and in every system of Law is divided into Corporeal and Incorporeal. Thus it is said in the Institutes of Justinian, L. II., t. 2: "Moreover some things (*Res*), or Property, are Corporeal and others Incorporeal. Things Corporeal are those which, by their nature, can be touched, such as land, a slave, clothes, gold, silver, and other things innumerable. Things Incorporeal are those which cannot be touched, such as those which consist in mere rights, as an inheritance, a usufruct, uses, and all obligations however contracted. Nor is it any objection that Corporeal things are contained in an inheritance; for fruits also which are gathered from land are corporeal; and that which is due on an obligation is usually corporeal, as land, a slave, money: but the right of inheritance, and the right of using and enjoying, and the right of the obligation are incorporeal."

Now this Incorporeal Property, which was comparatively very small in ancient times, and even in Smith's time, was probably far inferior in magnitude to Corporeal Property, has since then assumed a gigantic development, and now exceeds many times the amount of Corporeal Property. It includes all such property as Bank Notes, Bills of Exchange, and other forms of Credit, Public Debts, Shares in Commercial Companies, Copyrights, Patents, the Practice of a Professional man, the Goodwill of a business, all species of Annuities, Tolls, Ferries, Advowsons, &c.

All this stupendous mass of Incorporeal Property is expressly classed under the title of WEALTH in Roman Law, and in every system of Law, because it can all be bought and sold.

So says Ulpian[1]:—"Ea enim res est, quæ emi et venire potest.

For that is Wealth which may be bought and sold.

All species of Property, whether Corporeal or Incorporeal, were classed under "*Res*," "*Bona*," or "*Pecunia*" in the

[1] *Liber 34, ad Edict.*

Pandects of Justinian, or under *πράγματα*—goods and chattels, or *χρήματα*—wealth, in the Basilica, the revised code of Justinian, promulgated by the Basilian dynasty in the 10th century.

Out of several passages we may select the following:—

Digest, 50, 16, 23—Rei appellatione et causæ et jura continentur.

Basil, 2, 2, 21—*τῇ τοῦ πράγματος προσηγορίᾳ καὶ αἰτίαι καὶ τὰ δίκαια περιέχεται.*

Under the name of "goods" both causes and rights are included.

Digest, 50, 16, 49—Æque bonis adnumerabitur etiam si quid est in actionibus * * nam hæc omnia in bonis esse videntur.

*Under "goods," too, are properly reckoned rights of action * * because all these seem to be part of our property.*

Digest, 50, 16, 222—PECUNIÆ nomine non solum numerata pecunia, sed omnes res tam soli quam mobiles, et tam corpora quam JURA continentur.

Basil. 2, 2, 204—*τῷ ὀνόματι τῶν χρημάτων οὐ μόνον τὰ χρήματα, ἀλλὰ πάντα τὰ κινητὰ καὶ ἀκίνητα, καὶ τὰ σωματικὰ καὶ τὰ δίκαια, δηλοῦται.*

Under the name of WEALTH, *not only ready money, but all things, immoveable and moveable, corporeal as well as* RIGHTS, *are included.*

So *merx*, merchandize, in Roman Law was applied to anything which could be bought and sold, whether it was Corporeal or Incorporeal. *Digest*, 18, 34, § 1, 2.—Omnium rerum, quas quis habere, vel possidere, vel *persequi* potest, venditio recte fit.

A person may lawfully sell anything which he has or possesses, or has the right to sue for.

And this includes besides all material property, all Incorporeal Property, such as servitudes, obligations, or Debts, or rights to sue for money, and all rights of action whatsoever: and also besides the right of demanding something from some specific person, the *emptio spei*, or *emptio rei speratæ*, the expectation of an uncertain profit, which includes Copyright, Patents, the Goodwill of a business, Shares in commercial companies, &c. These subjects are more fully entered upon a few sections further on, where we consider the classification of

property; our only object at present is to ascertain the different species of quantities to which the title Wealth is applicable.

Thus we see that the word χρήματα was used in Greek to include all the three species of exchangeable quantities: material substances; labour, services, or sciences; and incorporeal property of all sorts. The words *merx*, *res*, *bona*, *pecunia*, were used in Roman Law to include all property corporeal and incorporeal. We are not aware whether they were ever used to include services and labour, but if such a discussion had been raised, we do not doubt but that it would have been decided in the affirmative.

These kinds of property are also included under the French words *biens* or *choses*.

So in English law, Obligations, such as Notes, Bills, and Debts of all sorts, are included in the words "goods and chattels" or "effects" in an Act of Parliament.[1]

We have shewn that Smith expressly enumerates paper currency of all sorts, which is Credit, under the title of Capital.

So J. B. Say says[2]—"The exclusive possession which in the midst of society, clearly distinguishes the property of one person from the property of another, in common usage, is that to which the title of *Wealth* is given. The blessings of Nature which every one enjoys in common are not included in the inventory of a man; but there are included in it that portion of social riches which belong to him individually, which he has acquired by his own labour, or which he holds by gift, or inheritance. Under this title are included not only things which are directly capable of satisfying the wants of men, either natural or social, but the things which can only satisfy them indirectly, such as money, instruments of credit (*titres de créance*), the public funds, &c.

Whately is the only English Economist, that we are aware of, who has called special attention to Incorporeal Property. He says[3]—"The only difficulty I can foresee as attendant on the language I have now been using, is one which (*i. e.*, defining Political Economy as the Science of Exchanges) vanishes so readily

[1] *Slade* v. *Morley*, 4 Co., R. 92 b. *Ford's case*, 12 Co., R. 1. *Clayton's case*, Lytt. 86. *Ryal* v. *Rowles*, 1 Ves., *Sen.* 348.

[2] *Cours. Part I., ch.* 1. [3] *Lectures*, *p.* 6.

on a moment's reflection, as to be hardly worth mentioning. In many cases, where an exchange really takes place, the fact is liable (till the attention is called to it) to be overlooked, in consequence of our not seeing any actual transfer from hand to hand of a material object. For instance, when the copyright of a book is sold to a bookseller, the article transferred is not the mere paper covered with writing, but the exclusive *privilege* of printing and publishing. It is plain, however, on a moment's thought, that the transaction is as real an exchange, as that which takes place between the bookseller and his customers, who buy copies of the work. The payment of rent for land is a transaction of a similar kind, for, though the land itself is a material object, it is not this that is parted with to the tenant, but the *Right* to till it, or to make use of it in some other specified manner. Sometimes, for instance, rent is paid for a right of way through another's field, or for liberty to erect a booth during a fair, or to race or exercise horses, &c." And he says in a note to this passage—"This instance, by the way, evinces the impropriety of limiting the term Wealth to *material* objects." Thus we see that Whately includes all the three species of quantities we have spoken of under the title of Wealth.

On Mr. J. S. Mill's Definition of Wealth.

10. Mr. Mill's work is so extensively read in this country, that we must examine what he says about Wealth.

He says, p. 2—"It is no part of the design of this treatise to aim at metaphysical nicety of definition, where the ideas suggested by a term are already as determinate as practical purposes require;" and that "every one has a notion sufficiently correct for common purposes, of what is meant by wealth." We shall now have to examine whether this be so or not.

He says[1]—"Money being the instrument of an important public and private purpose is rightly regarded as wealth; but everything else which serves any human purpose, and which Nature does not afford gratuitously, is wealth also. To be wealthy is to have a large stock of useful articles, or to have

[1] *Preliminary Remarks.*

the means of purchasing them. *Everything forms therefore a part of wealth, which has power of purchasing.*" Now here is a definition clear, simple, and comprehensive, exactly agreeing with the ancient definition of Aristotle and Roman Law, that Wealth is anything which is exchangeable. We certainly hoped that we had got rid for ever of the notion that wealth is the "annual produce of land and labour," and it is clear that Mr. Mill's definition is large and general enough to include all three species of Exchangeable Quantities. According to this definition, the production of wealth must mean the production of something which is exchangeable. What then is our surprise to read a few pages further on—"The production of wealth: the extraction of the instruments of human subsistence and enjoyment from the materials of the globe." Now this passage is in complete contradiction to his former definition. For we are once more plunged into Physiocracy, from which we hoped to have been free; we are once more brought back to the "produce of land and labour," and all idea of exchangeability has disappeared from the definition. Now, leaving out labour and sciences for the present, Bank Notes, Bills, &c., are exchangeable: they have power of purchasing, therefore they are wealth by Mr. Mill's own definition; but how are they extracted from the materials of the globe?

Again, a little further on, we are plunged into still further confusion. In the chapter on Unproductive Labour, he says, that productive labour is not labour productive of utility, but of wealth[1]—"Productive labour means labour productive of wealth. We are recalled therefore to the question touched upon in our first chapter, what Wealth is, and whether only material products are to be included in it.

2. Now the utilities produced by labour are of three kinds. They are—

First, utilities fixed and embodied in outward objects; by labour employed in investing external material things with properties which render them serviceable to human beings. This is the common case, and requires no illustration.

Secondly, utilities fixed and embodied in human beings; the labour being in this case employed in conferring on human beings, qualities which render them serviceable to themselves

[1] *Book I., Ch.* 3, 1, 2.

and others. To this class belongs the labour of all concerned in education; not only schoolmasters, tutors and professors, but governments, so far as they aim successfully at the improvement of the people; moralists and clergymen, as far as productive of benefit; the labour of physicians, as far as instrumental in preserving life and physical, or mental efficiency, of the teachers of bodily exercises, and of the various trades, sciences, and arts, together with the labours of the learners in acquiring them; and all labour bestowed by any persons, throughout life, in improving the knowledge, or cultivating the bodily or mental faculties of themselves or others.

"Thirdly, and lastly, utilities not fixed or embodied in any object, but consisting in a mere service rendered; a pleasure given, an inconvenience or a pain averted during a longer or a shorter time, but without leaving a permanent acquisition in the improved qualities of any person or thing; the labour being employed in producing an utility directly, not (as in the two former cases) in fitting some other thing to afford an utility. Such, for example, is the labour of the musical performer, the actor, the public declaimer or reciter, and the showman. Some good may no doubt be produced, and much more might be produced, beyond the moment, upon the feelings and disposition, or general state of enjoyment of the spectators; or instead of good there may be harm; but neither the one nor the other is the effect intended, is the result for which the exhibitor works, and the spectator pays; nothing but the immediate pleasure. Such, again, is the labour of the army and navy; they at the best prevent a country from being conquered, or from being injured and insulted, which is a service, but in all other respects leave the country neither improved nor deteriorated. Such, too, is the labour of the legislator, the judge, the officer of justice, and all other agents of government in their ordinary functions, apart from any influence they may exert on the improvement of the national mind. The service which they render is to maintain peace and security: these compose the utility which they produce. It may appear to some that carriers, and merchants or dealers, should be placed in this same class, since their labour does not add any properties to objects; but I reply that it does, it adds the property of being in the place where they are wanted, instead of being in some other place, which is a very

useful property, and the utility it confers is embodied in the things themselves, which now actually are in the place where they are required for use, and in consequence of that increased utility could be sold at an increased price, proportioned to the labour expending in conferring it. This labour, therefore, does not belong to the third class, but to the first.

"3. We have now to consider which of these three classes of labour should be accounted productive of wealth, since that is what the term productive, when used by itself, must be understood to import. Utilities of the third class, consisting in pleasures which only exist while being performed, *cannot be spoken of as wealth, except by an acknowledged metaphor. It is essential to the idea of wealth to be susceptible of accumulation:* things which cannot, after being produced be kept for some time before being used, are never, I think, regarded as wealth, since however much of them may be produced and enjoyed, the person benefited by them is no richer, is nowise improved in circumstances. But there is not so distinct and positive a violation of usage in considering as Wealth, any product which is both useful and susceptible of accumulation. The skill and the energy and the perseverance of the artisans of a country, are reckoned part of its wealth, no less than their tools and machinery. According to this definition, we should regard all labour as productive, which is employed in creating permanent utilities, whether embodied in human beings, or in any other animate or inanimate objects.

"But in applying the term wealth to the industrial capacities of human beings, there seems always in popular apprehension to be a tacit reference to material products. The skill of an artisan is accounted wealth only as being the means of acquiring wealth in a material sense, and any qualities not tending visibly to that object are scarcely so regarded at all. A country would hardly be said to be richer except by a metaphor, however precious a possession it might have been in the genius, the virtues, or the accomplishments of its inhabitants; unless, indeed, these were looked upon as marketable commodities, by which it could attract the material wealth of other countries, as the Greeks of old and several modern nations have done. While, therefore, I should prefer, were I constructing a new technical language, to *make the distinction turn upon the permanence rather than upon*

the materiality of the product, yet when employing terms which common usage has taken complete possession of, it seems advisable so to employ them as to do the least possible violence to usage; since any improvement in terminology obtained by straining the received meaning of a popular phrase, is generally purchased beyond its value, by the obscurity arising from the conflict between new and old associations.

"I shall therefore in this treatise, when speaking of wealth, understand by it only what is called *material* wealth."

The incongruity of ideas between this passage and the simple general definition Mr. Mill began with, that wealth is anything which has purchasing power, is manifest, and also with that in which he speaks of the production of wealth as the extraction of the means of human enjoyment from the materials of the globe. For in this passage he distinctly admits the intellectual qualities and skill of working men to be wealth, and are they extracted from the materials of the globe? Cattle, too, are certainly wealth, and are they extracted from the materials of the globe by human labour? Now, with respect to what Mr. Mill says about services, &c., never being spoken of as wealth except by an acknowledged metaphor, we may say that this was conclusively settled in the *Eryxias*, which we have already quoted; and also by J. B. Say, as well as by Mr. Mill's own definition. They are exchangeable, they can purchase money, therefore they are wealth. But Mr. Mill has now introduced a new qualification into his definition of wealth. He says that it is essential to the idea of wealth to be susceptible of accumulation, and that things which cannot be kept for some time before being used, after they are produced are not regarded as wealth, and the person benefited by them is no richer or improved in circumstances. But *what* time must products be capable of being kept, to be called wealth? A bun may be kept some time before it is eaten, therefore it is wealth. But after a man has eaten a bun, how is he the richer? Mr. Mill says he should prefer to make the definition turn upon the *permanence* rather than on the *materiality* of the products. But what degree of *permanence* is required to constitute a thing wealth? Exchangeable things are of all degrees of permanence. Some may last as long as the world itself, others may only last a very short time. And which of these degrees

of permanence is necessary to satisfy Mr. Mill's definition? It is evident that there is no degree of permanence that can be fixed upon for this purpose.

But the restriction which Mr. Mill has now introduced into the definition of wealth, that it must be material, has plunged him into still greater confusion when he comes to speak of credit. He defines wealth to be anything which has power of purchase. In speaking of credit, he says that it is purchasing power, and therefore wealth by his own definition. He then says that bank notes, bills, and cheques are of the same value as money, and perform all the functions of money, and are therefore wealth by his own definition, and he several times calls bank notes productive capital. Now, are bank notes material, and extracted from the materials of the globe? This subject is more fully examined further on. But we have placed before our readers enough to shew them the contradiction of Mr. Mill's ideas in different passages on the meaning of wealth, and to shew that every one has not a sufficiently correct notion of what wealth is. It may, perhaps, be superfluous to say that we reject entirely all the subsequent modifications and restrictions he has introduced into the definition, and agree to the first general definition he began with, that wealth is everything which is exchangeable.

11. Now, having shown that Exchangeability is the essential idea or conception upon which the quality of Wealth is based, by the unanimous agreement of all writers, ancient and modern, we observe that:—

I. Labour may be bestowed on many things which may not be exchangeable, and therefore not Wealth.

That there are many things which are exchangeable which have never had any labour bestowed upon them, such as land in towns, cattle, trees, obligations of all sorts.

Therefore Labour is not necessary to Wealth, it is only the accident of Wealth.

II. That many material things are not exchangeable: and many exchangeable things are not material; such as Labour of all sorts, Knowledge, Sciences, and all Incorporeal Property.

Therefore Materiality is not necessary to Wealth, it is only the accident of Wealth.

III. That some things are of all degrees of Permanence, or durability, from perpetuity downwards to those which are only capable of *one* exchange, and perish in the using like services, instruction, &c. Now the *Law of Continuity* says that that which is true up to the limit is true at the limit. Consequently, if those things are admitted to be wealth which are of various degrees of permanence, and can be exchanged various numbers of times, those things must also be admitted to be wealth which are of the *least* degree of permanence, and only capable of being exchanged the *least* number of times, which is *once*.

Therefore permanence or durability is not necessary to Wealth, it is only the accident of Wealth.

Hence we see that neither Labour, Materiality, nor Durability are necessary to Wealth, nor is any combination of them necessary to Wealth; they are only the accidents of Wealth. Hence by the laws of Inductive Logic we eliminate all these three as accidental and intrusive ideas, and leave Exchangeability alone as the single general idea or quality which constitutes a thing Wealth.

Hence in the following treatise we have nothing to do with any other quality anything may possess besides Exchangeability. Many things are very useful and agreeable, but we can take no notice of such qualities. On the other hand, we must include all quantities in which the quality of exchangeability is found. But as the word wealth is so frequently associated in popular estimation with useful and agreeable things, that it may be of advantage to use some word equivalent to it which is not so connected with other qualities, we shall use the expressions "Wealth" and "Exchangeable Quantities," or "Economic Quantities," as identical in future.

Economic Quantities are of three distinct species:—1. Corporeal or Material substances, of which Money may be taken as the symbol; 2. Immaterial, which may be included under the designation of Labour; 3. Incorporeal, of which Credit may be taken as the symbol. Hence we may say that any Economic Quantity must be of one of the three forms; Money, Labour, or Credit. We shall now seek for a term which will include them all.

On the Meaning of the words PROPERTY *and* ESTATE.

12. We shall find that it will throw a flood of light over the whole of Economic Science, and remove all the difficulties which the word Wealth has given rise to, to understand clearly the true and original meaning of the words *Property* and *Estate*.

Most persons when they hear the word Property, think of some material things, such as money, tables, lands, houses, carriages, &c. So when they speak of an Estate they usually mean a certain quantity of land. But that is not the true meaning of the words Property or Estate. They, in reality, mean certain *Rights* residing in some persons to certain things.

In the rude early Roman Jurisprudence a man's possessions were called *mancipium*, because it was supposed he must grasp them with the hand, and if he did not keep a pretty firm hold on them, he might soon lose them. When civilization improved, it was held that all things belonged in common to the house, and the absolute right to them was concentrated in the *dominus*, head of the house; hence the right was called *dominium;* subsequently when the excessive rigour of the law was relaxed, and individual members of the family were allowed to have rights to things separately, the word *Proprietas* came into use. "Dominium," says Neratius,[1] "id est Proprietas."

Hence, in Roman Law, Proprietas meant *ownership*, a right to have something, exclusively to any one else. We do not believe that the word *proprietas* was ever applied in Roman Law to the things themselves.

It is the same with respect to the words Property and Estate in English Law. To call the land itself an "estate," would have seemed a wondrous perversion of language to Littleton. Bacon never uses the word Property to mean houses, goods, or lands. To apply the words Property and Estate to mean money, houses, lands, &c., is comparatively a modern corruption, and we cannot say when it began. Bacon says that one of the uses of the Law "is to dispose the Property of their goods and lands," and he explains the different methods by which the "Property in land is got and transferred;" though even here we may mark a certain degeneracy of language, as we do not believe

[1] *Digest*, 41, 1.

that Littleton would have used the word Property for the right in land held by a subject. So Bacon explains the various methods by which "Property in goods and chattels may be acquired." So he speaks of the "Interest or Property of a timber-tree."[1]

In no single instance does he, or, we believe, any writer of his time, use the word Property to mean the things themselves.

We may also observe that several words in Latin which are usually applied to things, in reality meant rights. Thus *Iter* in reality means the *right* of going on foot through the grounds of another person, and not the pathway itself; *Actus* is the *right* of driving cattle or carriages over the ground of another, and not the roadway; *Via* includes the *right* of driving cattle or carriages, and going on foot, and not the highroad itself; *Aquæductus* means the *right* of bringing water over another's grounds, and not the stones, or bricks and mortar, of which the material channel is composed: and there are many words in English law which are usually thought to mean things which are in reality *rights* to things.

Property, therefore, being the *Right* residing in a person to a certain thing, may be either absolute, that is, without any superior, or else it may be derived from and held subordinate to some superior.

Absolute property is termed *allodial*, and holds with regard to all moveable goods and chattels, and in former times in England with respect to land. In the Roman Empire the owners of land held it in absolute property or *dominium*, without any superior, and this was so in England as well as in other countries. Before the Conquest the absolute Property in the land belonged to the people, and a man's lands were equally divided among his children, which law many suppose to be the origin of the multitudinous hedge-rows, which in many counties used to divide the lands into so many minute and irregular patches, but which are fast disappearing before the improvements in modern agriculture. It is true that the feudal system of tenure had to a certain extent been introduced before the Conquest. But William I. assumed the absolute property in all the lands of England, except the Church lands, and the county of Kent, for the Crown. He made a composition with

[1] *Case of impeachment of waste.*

the men of Kent to maintain their ancient customs, so that land in Kent remained as formerly, divisible among the family. The whole Property of the land being then vested in the Crown, the Conqueror granted out to his followers certain Rights of use and enjoyment in certain lands, and these Rights were denominated "Estates." But those who enjoyed them, and were bound to render certain services in return, were never called owners or proprietors, but always TENANTS. Thus we always speak of the tenure of lands, and all rights to use and enjoy lands are called *tenures*. So Littleton speaks of Tenants in fee-simple, Tenants for life, Tenants at will, Tenants by copy, Tenants for terms of years, joint Tenants, Tenants in common, Tenants by grand serjeanty, &c., and these persons were strictly Tenants, because they were only permitted to hold these lands on the express condition of performing certain services to the Crown, which, if they failed to do, they were as strictly liable to forfeiture as a modern farmer, or tenant would be for non-payment of rent.

Thus the index, or tabula to Littleton, says—"The first book is of *estates* which men have in lands and tenements," and in page 1 he says—"For these words (his heirs) make the *estate* of inheritance." So B. III, c. 2—"Of estates upon condition," he says, "estates which men have in lands or tenements upon condition are of two sorts," and in many other passages, and Littleton certainly would never have thought of applying the word *estate* to the land itself. So Bacon says—"Property of lands by conveyance is first distributed into *estates* for years; for life, in tail, and fee-simple. These estates are created by word, by writing, or by record."

An estate, therefore, is always a Right of an inferior order to that of Property. It in reality means a *lease*; as Bacon says—"For *estates* for years which are commonly called *leases* for years." Such interests or estates in land were always given as the *fee* or reward for services rendered to the Crown. Thus, as Bacon says—"The last and greatest estate of lands is fee-simple, and beyond this there is none of the former for lives, years, or entails; but beyond them is fee-simple. For it is the greatest, last, and uttermost degree of estates in land."

And so many other passages might be cited. The true meaning of estate, therefore, is a lease, or right to use a thing

derived from a higher power, for which some service is given, which is *feudal* property; and an estate in fee simple means a perpetual lease of lands or tenements, and it is only in strictness applicable to land.

This meaning of the word estate is also shown in Shakespeare, *Tempest*, Act IV., sc. 1:

> *Iris.* A contract of true love to celebrate,
> And some donation freely to *estate*,
> On the blessed lovers.

Also in *A Midsummer Night's Dream*, Act I., sc. 1:

> *Ægeus.* And all my right of her,
> I do *estate* unto Demetrius.

So in *As You Like It*, Act V., sc. 1:

> *Oliver.* All the revenue that was old Sir Roland's will I *estate* upon you.

Property, therefore, in its real and original sense means OWNERSHIP, or the Right residing in some person to some things, to use them as he pleases; and when we speak of an exchange, it always means that the ownership, or property, in certain things is ceded or given in exchange for the ownership, or property, in certain other things. Thus if we sell or exchange money for a book, it means that we exchange the property in, or the right to the money for the property in, or the right to the book. And there can be no exchange without the property in the things passing reciprocally from one to the other. If a man merely lends his horse or his book to a friend, that is no exchange or transfer of property.

And this meaning of the word Property was well understood by one of the most eminent Physiocrates, Mercier de la Rivière. He says[1]:—"Property is nothing but the right to enjoy; hence it is impossible to conceive the right to enjoy separately from the freedom to enjoy." "We see, therefore, that landed property is not a factitious or arbitrary institution; that it is nothing but the development of personal property, the last degree of extension of which this is susceptible. We see that there is but one single species of Property—that of personal right or property, and it changes its name according to the nature of the objects to which it is applied." "It would be superfluous to say that property in land necessarily includes the property in its products. Property is

[1] *L'ordre Naturel des sociétés politiques*, c. xviii.

the right to enjoy; hence the enjoyment of the products which can be extracted from it." And throughout the whole of his work, this author invariably uses the word property in its true and original meaning of a RIGHT, and not in its corrupted meaning of a thing.

We may observe that the same corruption of meaning has been applied to the word *Farm*. A farm is universally understood now to mean a quantity of land let by one person to another. A good farmer means a good agriculturist. But in reality a farm means the Right to receive the whole profits of an undertaking upon agreeing to pay a fixed sum for the right. Thus in France it was customary to farm the taxes, and several of the most notorious persons in French history were the farmers-general of the taxes. To call a piece of land a *farm* is as gross an absurdity as to call it a *lease*; it is equally erroneous to call it an *estate*; and it is just as erroneous to call a thing *property*, as to call it a *right*.

13. Property, then, being clearly understood to be a *Right*, residing in a person, there are three distinct species of Property, or Economic Rights, which may be sold, or exchanged, either absolutely, or for a certain period of time.

I. There may be Property in specified physical substances, which are already in existence, and in the possession of the proprietor, such as lands, houses, money, clothes, furniture, &c. These things are in a complete state of existence. This species of Property is called in Roman and English Law *Corporeal* Property, because it is the Right, or property in some specific *corpus*. It may also be called *Material* Property, because it is Property in some specific *matter*. Hence we shall denominate this species of Property either as Material or Corporeal Property, or as Material, or Corporeal, Wealth.

II. The Property that a man has in himself, and in the fruits of his own mind, that is in his own *Labour* of all sorts. "The property which every man has in his own labour, as it is the original foundation of all other property, so it is the most sacred and inviolable. The patrimony of a poor man lies in the strength and dexterity of his hands; and to hinder him from employing this strength and dexterity in what manner he thinks proper, without injury to his neighbour is a plain

violation of this most sacred property."[1] And the same is true of every other species of labour, mental or intellectual. Now, though a man cannot be sold absolutely as a slave in this country, nor can he sell the right to demand his services for life, yet he may sell or exchange for a limited time the right or property to use his services in any capacity, either as a manual labourer, as an agriculturist, or an artisan, or navvy, or as an instructor of any sort, as a lawyer, or physician, or performer, an author, or any other trade or profession. Hence services and intellectual qualities of all sorts are reduced to Rights or Property. Now as all these services, although they require some bodily instrument to give effect to them are in reality operations of the mind, we may call them *Immaterial* Property, or *Immaterial Wealth*, because it is a Property or Right, but not in any material substance.

III. There is, lastly, a third species of Property or Right. We may have a Right or Property wholly severed and separated from any specific *corpus*, or matter, in possession. It may either be in the possession of some one else at the time, and may only become our property at some future time; or it may not even be in existence at the time. Thus we may have the Right or Property to demand a sum of money at some future time from some person. That sum of money, no doubt, is in existence, but it is not in our possession; it may not even be in the possession of the person bound to pay it. It may pass through any number of hands before it is paid to us. But yet our Property to receive it is present and existing, and we may sell or transfer that property to any one else for money. We may also have a Right or Property to something which is not even yet in existence, but will only come into existence at a future time. Thus those who possess lands or cattle, fruit trees, &c., have the Property in their future produce, and may sell or exchange that Property like any material property. This species of property is called in English and Roman Law Incorporeal Property, because it is Property separated from any specific *corpus*.

Now anything whatever that can be sold or transferred is of one of these *three* species of Property: there is nothing which can be bought and sold which is not one of these forms, Money,

[1] *Wealth of Nations*, *B. I.*, *c.* 10.

Labour, and Credit. Hence we are now sure of our ground, and may begin to generalize with safety, because we have got *all* the species of Economic Quantities. And all the Fundamental Conceptions of Economics must be generalized so as to grasp all these three species of Economic Quantities.

14. These three species of Economic Quantities may be exchanged in SIX different ways:—

1. A material product for a material product, as gold money for so much corn, manufactures, &c.

2. A material product for an immaterial product; as gold money for so much labour, or instruction, of any sort.

3. A material product for incorporeal property, such as gold money for debt, or so much stock, or the Funds, or a copyright, &c.

4. An immaterial product for an immaterial product, as so much instruction, or labour, of one sort may be exchanged for so much instruction or labour of another sort.

5. An immaterial product for incorporeal property, as so much instruction or labour for a Bank Note, Cheque, &c.

6. Incorporeal Property for incorporeal property; as we may buy or sell a copyright, or patent, for bank notes, cheque, &c.; or one kind of debt may be exchanged for another kind; as when a banker buys or discounts, as it is technically termed a debt, payable at a future date, by means of creating a debt payable on demand, which forms the great business of banking, the greatest branch of modern commerce.

The business of the Physical Economist is to discover and express a great single General Law, which governs all these distinct species of Exchanges.

We have now laid a solid foundation for a general science of Economics, and there is no fear that our doctrines can be overthrown by the introduction of new quantities, as is so frequently the case in other sciences, because it is perfectly well known that there are three, and only three, species of Economic Quantities, and that there are six, and only six species of Exchange.

The principal source of error and confusion in Economic Science has arisen from the fact that the nomenclature which is still very commonly used was originated by writers who only considered one class of cases, namely, the exchange of material

products against material products; and they lay down definitions and laws which are only even apparently applicable to that single class of cases, and not even in reality true in that single class, and which the least experience and reflection shew are wholly erroneous when applied to other cases, and are, therefore, not general, and have no possible application to the last and most important species of exchanges, namely, that of debts for debts.

We now at last see what is the true Economic meaning of the word WEALTH. It is an EXCHANGEABLE RIGHT. The Physiocrates said that all products are ultimately exchanged against products. This doctrine was adopted by J. B. Say, but it was seen to be incorrect. Bastiat says[1]—

"Labour is the only subject of exchange. * * Into what we denominate products there enter different degrees of natural utility and different degrees of artificial utility; the latter, which alone implies labour, is alone the subject of human exchanges; and without contesting in any way the celebrated and suggestive formula of J. B. Say, I esteem it more rigorously scientific to say that *Labour is exchanged against Labour*, or, better still, *Services are exchanged against Services.*" Now we shall have to show hereafter that it is a great error to say that labour is the only subject of exchange. We have shewn that Wealth is an Exchangeable Right, and, therefore, all Exchanges are of RIGHTS against RIGHTS.

Examination of the Arguments against admitting Immaterial and Incorporeal Quantities into Economics.

15. The considerations given in the preceding sections are, we think, quite sufficient to prove that Immaterial and Incorporeal Quantities should be admitted into Economics. We have seen that the Physiocrates did not include them, but we have given what appears to us a sufficient answer to the arguments of Le Trosne, the only one who gave any reason why they should not be considered as Wealth. Most other writers have simply included or excluded them, as the case may be, without giving any arguments on either side. Malthus, however, has strenuously argued against their admittance, and, as his arguments

[1] *Harmonies Economiques. De la Population.*

have been adopted by some other writers, we must examine them, as this work would be incomplete unless we can not only show that they ought to be included, but also that the arguments against excluding them are erroneous.

It would occupy too much space to quote the whole of the passage in Malthus; we will therefore state his argument, and quote sufficient to give a complete view of his opinion. He begins by truly[1] observing on the importance of the definition of Wealth; and says it is sometimes supposed that a writer may define his terms in any manner he pleases, provided that he uses them strictly in the sense proposed. He very justly says that this doctrine cannot be accepted, because if he gives a definition of the subject, which is unusual or inadequate, he may render his inquiries perfectly futile; as, for instance, if any one were to define wealth arbitrarily, as consisting exclusively of broad-cloth, however consistent he might be in the use of the term, or however useful it might be as a treatise on that one article, it would be of no use to those who looked for a treatise on wealth, according to any common or useful meaning of the term.

He says that the comparative merits of the system of the Economists and of Adam Smith, depend upon their different definitions of Wealth, and Productive Labour. If the definition of these terms by the Economists is the more useful and correct, then their system is the correct one. If Smith's definitions of these terms is the better and more comprehensive, then his system is superior in utility and correctness.

Malthus then says that, of those who have given a definition of Wealth, some have made it too narrow, and some far too wide. The Economists made it too narrow by confining it to the neat produce of the earth. Lord Lauderdale, he says, made it far too wide by saying wealth is "all that man desires as useful and delightful to him."

"This definition obviously includes everything whether material or intellectual, whether tangible or otherwise, which contributes to the advantage or pleasure of mankind, and of course includes the benefits and qualifications derived from religion, from morals, from political and civil liberty, from oratory, from instructive and agreeable conversation, from music, dancing,

[1] *Principles of Political Economy, Ch. I.*

acting, and all personal qualities and services. It is certain, however, that an inquiry into the nature and causes of all these kinds of wealth, would not only extend beyond the bounds of any single science, but would occasion so great a change in the use of common terms as to introduce the utmost confusion into the language of political economists. It would be impossible to form any judgment of the state of a country from the use of the terms rich or richer. A nation might be said to be increasing in wealth, when to all common eyes, and in all common language, it might be growing poorer. This would be the case, according to the definition, if a diminution of the manufacturing and mercantile products had been balanced in the opinions of some persons by the qualifications derived from the intellectual attainments, and the various personal qualities and services of the inhabitants. But how is this balance to be ascertained? How is it possible to estimate the degree of wealth derived from these sources? Yet it is quite obvious that we cannot practically apply any discussions respecting the relative increase in the wealth of different nations, without having some means however rough of estimating the amount of such increase.

"Some modern writers who do not choose to adopt the language of Adam Smith, and yet see the confusion which would arise from including under the head of wealth every kind of benefit or gratification of which man is susceptible, have confined the definition to these objects alone, whether material or immaterial, which have value in exchange.

"This definition is certainly preferable to the more comprehensive one just noticed, but by no means to the extent which might at first be supposed. When it is considered attentively, it will be found to be open to a very great portion of the objections to which the more general one is liable, and to draw the line of demarcation between what ought and what ought not to be considered as wealth in the most indistinct and unsatisfactory manner.

"Passing over the incorrectness of introducing a term open to so much controversy as *value* into a definition of wealth, it may be observed—

"1st. That if by an object which has value in exchange be understood its susceptibility of being purchased or hired, then there is scarcely any quality or accomplishment of the mind or

body that would not come under the category of wealth. The possessor of the lowest species of literary knowledge, that of reading and writing may be hired to teach others; and, as all or nearly all who had acquired these useful arts are susceptible of such employment, an estimate of national wealth ought to include the value of these attainments, however various in degree and widely extended.

"2nd. All the knowledge acquired by a superior education and superior talents, on account of a similar susceptibility, would have a greater claim to be included in the estimate. The possessors of religious and moral knowledge, though obtained without any view to the instruction of others for a pecuniary remuneration, would be ready to sell such instruction under a reverse of fortune. The same may be said of a knowledge of classical literature, mathematics, history, natural philosophy, chemistry, geology, mineralogy, botany, &c., &c. On the same principle those who had learnt to dance, to sing, or to fence for their amusement might more or less imperfectly teach dancing, singing, or fencing for money.

"In short, if we include under the denomination of wealth all the qualities of the mind and body which are susceptible of being hired, we shall find that, by the restriction of the term wealth to that which has exchangeable value, we have advanced but little towards removing the confusion and uncertainty attendant upon the former definition; and all idea of estimating the increase of wealth in any country, or making any moderate approaches to it must be absolutely hopeless.

"On the other hand, if we confine the definition of wealth to those objects which either have been exchanged, or are specifically intended to be exchanged, we shall attempt to draw a broad line of demarcation between things in regard to their qualities are precisely similar; and further exclude from the category of wealth a great mass of articles, which have been included, and most correctly so, by Adam Smith and by almost every person who makes use of the term, either in writing or conversation.

"The various information acquired by private study, and destined for private use and enjoyment, may be of exactly the same kind as that which is intended to be let out if anybody will hire it, yet the first, in this classification, is not to be

called wealth, and the other is. The person who buys instruction buys an amount of wealth which it must be presumed is equal in value to what he has paid for it, while the self-taught person, who is in possession of much superior knowledge, has acquired no wealth. According to this definition, wealth cannot be given; it can only be bought. The instructions of the school-master are wealth; the same instructions given by a friend, or father, are not wealth. This is sufficiently inconsistent; but this is not all. By this definition of wealth a very large and most important portion of material commodities is excluded from the denomination. In the business of agriculture, a considerable share of the produce is always destined to be consumed on the spot without being exchanged. The common farmer calculates how much of what he produces must go to the support of his own family and working cattle, before he can determine how much he will have to sell. The gentleman farmer supports perhaps a large private establishment upon his farm, lives hospitably, receives numerous guests, and sells comparatively very little. Our feudal ancestors pursued this course to a much greater degree. In fact it was the only way in which they could spend the principal part of the products of their large possessions. The great Earl of Warwick is said to have supported thirty thousand people daily on his different manors; and at an earlier period, the elder Spencer in his petition to Parliament complains of the ravages made by the Barons on his estates, and enumerates 20,000 sheep, 1,000 oxen and heifers, 12,000 cows with their breed for two years, 560 cart horses, 2,000 hogs, 10 tons of cyder, together with 600 bacons, 80 carcasses of beef, and 600 muttons in the larder. From this enumeration, Hume observes, "the plain inference is, that the greater part of Spencer's vast estates, as well as the estates of the other nobility was farmed by the landlord himself, managed by his stewards or bailiffs, and cultivated by his villains."

"Little or none of it was let on lease to husbandmen. Its produce was consumed in rustic hospitality by the baron or his officers.

"Now this large mass of material commodities, increased as it would be by the flax and wool raised, spun, and wove for home consumption, few, it is conceived would venture to exclude from the denomination of wealth; and yet this produce has

neither actually been exchanged for money or other goods, nor has it been raised with the intention of being so exchanged, and, therefore, according to the last definition, it ought not to be considered as wealth.

"It must be allowed, nevertheless, that it has exchangeable value; and here one of the great characteristic differences between material objects and objects which are not material appears in a striking point of view. Of the quantity and quality of the material commodities here noticed it would not be difficult to make an inventory. Many household books, indeed, furnish one; and, knowing pretty nearly the quantity and quality of such articles, a fair approximation to their value might be attained by estimating them according to the market prices of the district at the time. But in regard to immaterial objects the difficulty seems to be insurmountable. Where is an inventory to be found, or how is one to be made of the quantity and quality of that large mass of knowledge and talents reserved for the use and consumption of the individual possessors and their friends. Or, supposing it were possible to form such an inventory, how could we make any moderate approaches towards a valuation of the articles it contained?

"Consequently, if by objects which have value in exchange we mean objects which are susceptible of being exchanged, we shall include such a mass of the mental and physical qualities of mankind as to make the term wealth convey no tolerably distinct and useful meaning.

"And if by objects which have value in exchange we mean only those objects which have actually been, or are specifically intended to be exchanged, we shall exclude from the denomination of wealth a large mass of material commodities which have always, and most justly, been classed under that head.

"To get rid of these obvious embarrassments, it has sometimes been the practice to consider the labour which is hired, as the wealth which is purchased without reference to its results. But it seems very strange and incorrect to consider mere labour as wealth. No one would give anything for it, if he were sure that it would yield no gratifying result. It is in the expectation of this result alone that labour is employed. The sick man employs a physician, not because he is pleased with the trouble which he gives him, but because he expects that his

health may be benefited by the advice which he receives. The lawyer is consulted and feed, only because his client expects to derive some advantage from the opinion to be given, or the cause to be pleaded. And even the menial servant is not hired on account of the desire to see a man work, but on account of the trouble which he will save his master in performing certain offices for him, or the gratification afforded to his vanity by the shew of having a person at his command.

"The natural consequences of these difficulties is that the ablest writers who have deserted *matter* in their definition of wealth, have fallen almost inevitably into contradictions and inconsistencies."

Malthus, then points out the amazing self-contradictions of J. B. Say on the subject of Wealth. As these are fully explained in the chapter on Credit, we need not set them out here. That Say has contradicted himself in the most extraordinary way is true, but we cannot admit that that is in any way the consequence of admitting immaterial and incorporeal quantities into Economics.

He then continues—"The fact really is, that if we once desert matter in the definition of wealth, there is no subsequent line of demarcation which has any tolerable degree of distinctness, or can be maintained with any tolerable consistency, till we have included such a mass of immaterial objects as utterly to confuse the meaning of the term, and render it impossible to speak with any approach towards precision, either of the wealth of different individuals, or different nations.

"If then we wish with M. Say to make political economy a positive science, founded on experience, and capable of making known its results, we must be particularly careful in defining its principal term, to embrace only those objects, the increase or decrease of which is capable of being estimated; and the line which it seems most natural and useful to draw is that which separates material from immaterial objects.

"Adam Smith has nowhere given a very regular and formal definition of wealth; but that the meaning which he attaches to the term is confined to material objects is throughout his work sufficiently manifest. His prevailing description of wealth may be said to be 'the annual produce of the land and labour.' The objections to it as a definition are, that it refers to the

sources of wealth before we are told what wealth is, and that it is not sufficiently discriminate, as it would include all the useless and unappropriated products of the earth, as well as those which are appropriated and enjoyed by man.

"To avoid these objections and to keep at an equal distance from a too confined or a too indiscriminate sense of the term, I should define wealth to be 'the material objects necessary, useful, or agreeable to man, which are voluntarily appropriated by individuals or nations. The definition thus limited includes nearly all the objects which usually enter into our conceptions when we speak of wealth or riches—an advantage of considerable importance as long as we retain these terms both in common use, and in the vocabulary of political economy.

"A country will therefore be rich or poor according to the abundance or scarcity with which these material objects are supplied, compared with the extent of territory; and the people will be rich or poor, according to the abundance or scarcity with which they are supplied."

In a note to this passage he says:—"In my little work on the 'Definitions in Political Economy,' published in 1827, I defined wealth to be 'The material objects necessary, useful, or agreeable to man, which have required some portion of human industry to appropriate or produce.' The latter part was added in order to exclude air, light, rain, &c., but there is some objection to the introduction of the term industry, or labour, into the definition, because an object might be considered as wealth which has had no labour employed on it. A diamond, accidentally found on the sea shore, might have a high value; and the fruit at the top of a tree must be considered by the savage as necessary or agreeable to him *before* he will make the exertions required to obtain it."

We have placed this long extract before the reader in order that he might see everything that can be urged on the subject, we are not aware of any arguments which have ever been used on that side of the question besides the above.

Before replying to them we must observe that we have already shewn that Malthus is completely mistaken in alleging that Smith confines the term wealth to *material* products; we have shewn that he expressly includes intellectual qualities and credit under the title of capital. We have next to observe that in his

latter definition given above, he has seen the necessity of eliminating the idea of labour from the term of wealth. This is a great step in advance. But from both of his definitions he has entirely omitted *exchangeability*, the very quality in which all writers ancient and modern have made the *essence* of wealth.

Now with respect to Malthus's arguments against admitting immaterial quantities into Economics, they appear to us to be unsound, and founded on a complete misconception of the nature of Economic Science. They are against all the analogy of Physical Science, and against the authority of all preceding writers, except the Economists.

We may say, in the first place, that there is no difficulty in deciding what is Wealth and what is not, because as Economic Science deals with nothing but exchanges, all immaterial products which are made the subject of exchange are within its pale, and those which are not made the subject of exchange are not. Moreover, their value is capable of as exact measurement as that of material substances. If the market price of so much instruction of any sort is a guinea, its value is measured with exactly the same precision as that of any material product whose value is a guinea. The distinction between persons who merely exercise their vocal and instrumental powers for the pleasure of themselves and their friends, and those who earn an income by them, is perfectly plain and distinct. The one is not a subject of taxation, the other is.

To say that we cannot make a catalogue of all the immaterial products in a country shews an entire misapprehension of the nature of Economic Science. No Economist ever yet thought of taking an inventory of the pots and pans in a gentleman's kitchen, or of his furniture, or of the coats and waistcoats in his wardrobe. No work on Economics ever yet attempted to give a valuation or catalogue of all the things in a country.

To suppose that it is necessary for Economics to enumerate all the things in a country, is as baseless as to suppose that it is necessary for the Science of Mechanics to enumerate all the steam engines and other machines in a country; or for the Science of Medicine to enumerate all the medical cases in a country; or for Zoology to enumerate all the animals in a country; or for the Science of Chemistry to ascertain the quantity of chemical elements in a country; or for the Science

of Optics to enumerate all the telescopes in a country. These are the statistics of their several subjects, and may have their interest and their use, but they form no part of the science of the subject.

If the arguments of Malthus were true, there could not be a Science of Economics until all things in a country had been catalogued, a doctrine as irrational as to say that there could not be a Science of Mechanics until all the machines in a country were numbered, nor a Science of Natural History until all animals were numbered, nor a Science of Optics until all the telescopes were numbered—a doctrine which is obviously untenable.

It appears to us that the plainest principles of common sense are against the doctrines of Malthus. Economics treats of Exchanges. Now it is certain that, in this country at least, nineteen-twentieths of the Exchanges which take place are of immaterial and incorporeal quantities. Now it certainly appears to be repugnant to the plainest principles of science to exclude from the Science of Exchanges at least nineteen-twentieths of the Exchanges that actually occur.

On the common difficulty felt in admitting Immaterial and Incorporeal Elements into Economics.

16. The real difficulty which impedes the true comprehension of the subject is very similar to that which for a considerable time obstructed the reception of the Newtonian doctrine of gravity on the Continent. It had been laid down as a dogma from the days of the Greek Philosophers that a body cannot act where it is not. When, therefore, the Newtonian doctrine of central forces was published, shewing that the motions of the planets might be all accounted for by certain forces emanating from the sun and themselves, the opponents of the system maintained that it violated the fundamental principle that a body cannot act where it is not, and many of the most distinguished philosophers on the Continent, such as Leibnitz, Huyghens, J. Bernouilli, refused to receive it on that account.

A very much more specious dogma, however, is at the root of the common unwillingness among uninstructed writers to admit Immaterial and Incorporeal elements into Economics. From the days of Anaxagoras and Epicurus it has been handed

down from age to age by succeeding generations of physicists that *Nothing can come out of Nothing*, and that *Nothing can go back into Nothing*. The fundamental dogma of Lucretius, the hierophant of the Epicurean Philosophy, is that *Nothing can come out of Nothing*, I., 151:

"NULLAM REM E NIHILO GIGNI DIVINITUS UNQUAM
* * * * * *
NIL igitur fieri de NILO posse fatendumst."

Moreover, that *Nothing can go back into Nothing*, I. 216, &c.:

"Huc accedit uti quæque in sua Corpora rursum
Dissolvat Natura, neque ad Nihilum interimat res.
* * * * * *
Nullius exitium patitur Natura videri.
* * * * * *
Immortali sunt natura prædita certe.
Haud igitur possunt ad Nilum quæque reverti.
* * * * * *
Haud igitur redit ad Nihilum res ulla, sed omnes
Discidio redeunt in corpora materiai.
* * * * * *
Haud igitur penitus pereunt quæcunque videntur
Quando alid ex alio reficit Natura, nec ullam
Rem gigni patitur, nisi morte adjutum alienâ."

And this is the constant *refrain* of the Lucretian Philosophy, that *Nothing can be produced from Nothing*, and that *Nothing can go back into Nothing*, I., 266, &c.:

"Nunc age res quoniam docui non posse creari
De Nihilo, neque item genitas ad Nil revocari.
* * * * * *
At quoniam supera docui NIL posse creari
De Nihilo, neque quod genitumst ad Nil revocari
Esse immortali Primordia corpore debent."

And this is the identical doctrine which physicists maintain to the present-day. Chemists delight to expatiate to their audience on the indestructibility of all things. How, seeming destruction is merely the dissolution of atoms under their present combinations, to re-appear in new forms and new combinations in perpetual succession.

But Economics and Law confound the best settled doctrines of the sages of old. It is true that many Economists have declared that man can call nothing into existence, and that all wealth comes from the earth. That wealth is but the particles

of matter, and that all that man can do is to re-arrange them, or place them in a new position, and let Nature do the rest. But their own doctrines, their own books, their own definitions confound all such notions. Economists, with scarcely an exception, are now agreed that whatever can be exchanged, whatever can be bought and sold is wealth. Twenty-two centuries ago the author of the Eryxias irrefragably proved that KNOWLEDGE is WEALTH. Aristotle defines wealth to be *everything* whose value can be measured in money. Smith, Say, Whately, Senior, and Mill all admit the intellectual qualities and talents of the people to be Wealth.

Knowledge, therefore, by the very generality of the definition, and the consent of every modern Economist of note—is WEALTH. And where does knowledge come from? And what is it formed out of? Does it come from the earth, and is it formed out of the materials of the globe? We should imagine that few would maintain that. All that we know is that knowledge originates *in* the mind. Knowledge is formed *in* the mind, by great Labour very often; but is it formed *out of* the materials of the mind? And if so, what is the mind composed of? Does it come from the earth? Are we to have an atomic theory of knowledge, or of the mind? Will some metaphysical Dalton tell us that knowledge or the human mind is composed of indestructible primordial atoms?

Πολλὰ τὰ δεινὰ, κοὐδὲν ἀνθρώπου δεινότερον πέλει.

But this same knowledge—*Whence* cometh it? *What* is it? *Whither* goeth it?

We know not—Do our readers?

Nathless it is WEALTH: and, therefore, it is within the domain of the Economist. It may be bought and sold: it may be valued: it may be accumulated: it may be handed down from age to age like any material product whatever. It is the produce of Labour just as much as any material product: every one of the great sciences is the product of the labour of innumerable toilers. The acquisition of knowledge is the acquisition of Wealth: and the loss of knowledge is the destruction of Wealth. And is the loss or destruction of knowledge the dissolution of indestructible primordial atoms? Here, then, are vast masses of Wealth; and the question is where does it come from? And what is it composed of? And there can be but

two answers to the question. Either knowledge is composed of indestructible primordial atoms, or it is not. If it be so, then of course the formation of knowledge is not the creation of Wealth out of nothing. But unless we are prepared to admit that—and who is?—the formation of knowledge must be the creation of Wealth out of nothing. And the loss or destruction of knowledge must be the DECREATION, or the return of Wealth into Nothing!

As one example of this out of thousands, we may take a case that was some years ago before the Scotch Courts. In the beginning of the 17th century, a man named Anderson discovered a way of making pills which soon became very popular. The secret of making these pills has been handed down from generation to generation, and has been a constant source of wealth to the possessors of it. Some years ago the owner of it became bankrupt, and his creditors claimed the right of having it given up to them, as part of the bankrupt's property. The pills have been analysed in vain by chemists, and the secret of their composition has never been able to be discovered. Now here is a manifest case of a trade secret—knowledge—being Wealth—and where did this wealth come from? And what is it composed of? Did it come from the earth? And is it composed of the materials of the globe? And yet it has been handed down as an heirloom from age to age. If the owner of the secret died without divulging it, there would be a manifest loss of Wealth. And what would become of it in that case? And this is only a particular example out of countless others. Trade secrets are expressly held in Law to be partnership assets.

Here, then, we have enormous masses of what every Economist, now-a-days, admits to be wealth, which overthrows the doctrine of the Physical Philosophers, that Nothing can come out of Nothing, and that Nothing can go back into Nothing. The doctrines of many Economists are equally overthrown, who say that all wealth comes from the earth, and that man cannot create wealth. For here we have great masses of wealth, which manifestly do not come from the earth, and are created by man. Hence it is manifest that there is another source of wealth besides the Earth, namely—the HUMAN MIND.

But the third species of Economic Quantities do not originate in the Earth, nor yet in the Mind. And here again we may

observe that Lucretius is at fault. For he says that there is nothing besides the void which is separated from something corporeal. I., 420, &c.

"Omnis ut est igitur, per se Natura duabus
Consistit rebus; nam CORPORA sunt et INANE.
* * * * * *
Præterea nihil est, quod possis dicere ab omni
Corpore sejunctum, secretumqu' esse ab INANI.
* * * * * *
Et facere et fungi sine CORPORE nulla potest res.
* * * * * *
Ergo præter INANE et CORPORA, tertia per se
Nulla potest rerum in numero Natura relinqui."

From these lines it is clear that Lucretius did not live in the days of Public Debts, Bills of Exchange, and Bank Notes, Copyrights, Shares, and other Incorporeal Property, or he would have found it necessary to modify this part of his Philosophy. We have already shewn that the Roman Lawyers divided property into Corporeal and Incorporeal, and that the latter, consisting of pure abstract Rights, was classed as Wealth, just as much as the former. If Lucretius had applied to the Roman Lawyers of his day, they would have told him that there were abundance of RES INCORPORALES, which "*faciebant*" and "*fungebantur*" without any *corpus* at all. If he had got his friend Cicero to explain to him the system of Roman Banking, he would have found in it the overthrow of the fundamental dogma of his philosophy. And in every system of Law the same distinction of property exists. Now, Bank Notes, Bills of Exchange, &c., are separate, independent, exchangeable property, and, therefore, *ex vi termini*, and also by the express declaration of Roman Law—Wealth. And what are they? Simply credit —DEBTS. And where do these Debts come from? Do they come from the materials of the globe? Are they, too, formed of indestructible primordial atoms? When a debt is created, is it the combination of material atoms? And when it is extinguished, is it the dissolution of certain material particles to reappear under another form? Are debts even the products of Labour and the Human Mind?

How is a debt created? By the mutual *consent* of two minds. By the mere *fiat* of the *Human Will*. And how is a debt extinguished? By the mere *fiat* of the *Human Will*.

Now, when two persons have agreed to create a debt—whence does it come? And what is it composed of? Is it extracted from the materials of the globe? Does it come even from the mind? No! it is a valuable product, created out of Absolute NOTHING, by the mere *fiat* of the Human Will. And when it is extinguished, it is a valuable product DECREATED into NOTHING by the mere *fiat* of the Human Will.

But besides Debts, there is an enormous mass of valuable property of a similar nature created by the mere Will of the Legislature, such as Copyrights, Patents, &c. It is true that the Legislature cannot make a Copyright a valuable thing; its value must proceed from a different source. But it can create the Right, and prevent it from being destroyed. Now the Copyrights held by a publisher are part of his fixed Capital. They are part of his Wealth, just as much as so much land. Whence do they come? From the materials of the globe? Or even from the human mind? It is clear that Copyrights are the pure creation of the Will of the Legislature. Suppose that the Legislature were to abolish Copyrights: would not that be an actual *annihilation* of Wealth, and not merely the dissolution of material atoms?

Precisely the same considerations apply to vast amounts of Property of a similar nature: such as policies of insurance, leases, and annuities of all sorts, such as public debts and others. They are all Property created by the mere *fiat* of the Human Will. And who can form the most distant conception of the value of all the Incorporeal Property in Great Britain?

Hence we observe that there is a third source of Wealth besides the Earth, and the Human mind, namely, the HUMAN WILL. By far the largest portion of Economic Quantities are merely the creations of the Human Will.

We may observe that Credit in Economics is very much analogous to Gravity in Mechanics. Gravity is Force pure and simple, dissociated from any material agency, and for some time some eminent men felt a difficulty in believing in it for that reason. Now Credit is Exchangeability pure and simple, dissociated from Labour and Materiality, and, therefore, some persons even yet find a difficulty in believing it to be Wealth. But argument and authority equally declare it to be so.

And now we see the advantage of removing all notions of Labour and Materiality from the definition of Wealth: and defining it to be exclusively an EXCHANGEABLE RIGHT. We have shewn conclusively from facts, and the doctrines of the most eminent authorities, ancient and modern, and not from vain dogmas, that man can CREATE Wealth. We do not of course mean that he can create *matter*, but that he can create RIGHTS, which may be bought and sold; and notwithstanding all the dogmas of philosophers founded in this instance on imperfect induction, the Lawyer, the Economist, the Merchant, and the Statesman must understand that the enormously greater proportion of Wealth, in a highly civilized and commercial country like Great Britain is the pure creation of man.

On the Application of the Positive and Negative Signs to Property.

17. We have seen that Economic Quantities, or Economic Rights, are of three species:—1st, Property in some material substance which has already been acquired: 2nd, Property in ourselves, our talents and services: and 3rd, Property in something which is only to be acquired or enjoyed at some future time.

Now we can absolutely part with, and divest ourselves of the Property in material substances, or the first species of Economic Quantities; in exchange for some reward, we can transfer to some one else the right to make use of our intellectual qualities or services, for a limited period or a special occasion. But though we may receive a reward for exercising our faculties in some person's service, we do not part with them: we may sell our knowledge, but it is not gone away from us. Like a candle which communicates light to others, it does not diminish our own light: a man may sell his instruction, but it does not diminish his own store. The third species of Economic Quantities are intangible and invisible like the second species, but they are transferable like the first, and when we exchange or sell them, we divest ourselves absolutely of our property in them, as we do of the first species.

Now we observe that the two species of Property of which we can absolutely divest ourselves, are inverse to each other. Property, like Janus, has two faces, placed back to back. It regards the past and the future, and is therefore of opposite

qualities. Now, in all Physical and Mathematical Science, it is invariably the custom to denote similar quantities, but of opposite qualities, by opposite signs. Hence, as a matter of simple convenience, and following the usual custom in Physical Science, if we denote one of these Properties as Positive, we may, as a distinguishing mark, denote the other as Negative.

We shall not here examine the important consequences which flow from this notation. We simply say at present, that if we denote Property in a product that *has been* acquired as *Positive*, it is perfectly consonant with the universal practice in Physical Philosophy, to denote Property in a product that *is to be* acquired as NEGATIVE.

Now Property in a thing that *has been* acquired is Corporeal Property; and Property in a thing that *is to be* acquired is Incorporeal Property. Hence, if we denote Corporeal Property by the Positive Sign, it is strictly in accordance with all Physical Philosophy, to denote Incorporeal Property by the Negative Sign.

And as in all Mathematical and Physical Sciences, the whole Science comprehends both Positive and Negative Quantities, so the whole Science of Economics comprehends both Positive Economic Quantities and Negative Economic Quantities, or Corporeal Property and Incorporeal Property.

On the Classification of Property.

18. We shall now show the practical convenience which arises from this distinction of Economic Quantities, as Positive and Negative, for many species of Property are of a mixed nature; that is, the entire Property in them consists partly of Corporeal Quantities, and partly of Incorporeal Quantities.

Property in Land is the highest property of all: and to understand the nature of Property in Land is the grammar of Property in general.

Things differ in their use according to their nature: some perish in the use: some perish from causes independent of their use: some are in a state of complete existence, and do not perish, and they give the means of complete enjoyment, as statues, gems, &c.

But Land is indestructible in its nature; its use is unlimited in duration, and constant and uniform in its quality.

Now suppose that we purchase an estate in land for the sum of £100,000: where is the value for our money? Does it consist in things which have a present existence? The veriest tyro would answer—Certainly not. Where, then, is the equivalent for the purchase money?

When we purchase an estate in land, we purchase the Right to the actually existing products of the land and labour, such as the houses, the timber, the crops on the ground, together with the Right to receive its annual profits, or produce, for ever. That is to say, we purchase the Property to receive actually existing material products, together with a series of products which will only come into existence at definite intervals of time for ever. Thus Property in Land consists of two perfectly distinct parts, Property in the products of the past, and the Property in the produce of the future—say £3,000 a-year for ever.

This Property in Land may be conveniently denoted thus:—Existing produce of the land, *together with*—£3,000—£3,000—£3,000, &c., for ever: where the Negative Sign means that the profits will come into existence at future intervals of time.

But though the yearly produce of the land will only come into existence at future intervals of time, the Property, or Right, to receive it as it does come into existence is present, and may be bought and sold like a table, or a book, or corn. That is to say, each of these annual profits for ever has a PRESENT VALUE, and the purchase money of the land is simply the sum of the present values of this series of future payments for ever.

Now the Right to receive any, or any number of these future profits is an estate in land, and as the entirety of the estates may belong to different persons, we have the whole legal doctrines of estates in remainder, in fee, in tail, in reversion, &c., with all their complications.

Again, although this series of future payments is infinite, a simple Algebraical formula shews that it has a finite limit, and what that limit is, depends partly upon the current rate of interest, as well as circumstances affecting each locality. Property in some parts of the country may be depressed below such a value by various local circumstances, and Property in other

parts of the country may be increased in value above the usual rate from other local circumstances.

When the usual rate of interest is 3 per cent. it is found that the total property in land is worth about 33 times its annual profits, and consequently 32 parts out of 33 of the total property in land is Incorporeal, the remaining part only being Corporeal.

Now when a purchaser has paid for the land, it may be said without any very great metaphor, that it *owes* him a series of annual payments for ever, as he bought it merely on the *belief* that he would receive them, hence we may call this Right to receive the future produce of the land the CREDIT of the land. And it is by the notation we have adopted, a Negative Economic Quantity.

When a trader of any sort has established a business of reputation it may be calculated after a certain time what the profits may be expected to be; and the Right to receive these future profits is a recognized article of commerce, and is called the GOODWILL of the business. It is the *emptio spei*, or the *emptio rei speratæ* of Roman Law. This property is the result of the trader's Labour and Talents, and is manifestly incorporeal, and lies wholly in the future, and is therefore negative.

That the goodwill of a business is a valuable property is so well known to every trader, lawyer, and man of business, that it may seem almost superfluous to mention it. Yet J. B. Say is the only Economist, that we are aware of, who recognizes the existence of such property; and even he seems to forget it in many of his doctrines.

We may cite an instance which may interest our readers. Boswell says that Thrale, the great brewer, appointed Johnson one of his executors. In that capacity it became his duty to sell the business. When the sale was going on—"Johnson appeared bustling about, with an inkhorn and pen in his button hole, like an exciseman; and on being asked what he really considered to be the value of the property which was to be disposed of, answered, "We are not here to sell a parcel of boilers and vats, but the POTENTIALITY of growing rich beyond the dreams of avarice." This latter phrase was merely a Johnsonian expression for the goodwill of the business. The price realized on this occasion was, we are told

elsewhere, £135,000. Now this sum was not given for the boilers and vats only, the result of *past* labour: but it comprehended: 1st, a sum for the actual space of ground on which the brewery stood, which space of ground was not the result of labour at all, and whose value was in no way due to labour; 2nd, the price of the houses and buildings, the boilers and the vats, the result of past labour; and 3rd, the price of the incorporeal *potentiality* (the *emptio rei speratæ*) which lay wholly in the future, and was therefore Negative by our notation. Now this potentiality was the result of labour, but it was not corporeal; but it could be bought and sold: it could not be handled or seen, but its value could be measured in money: and, therefore, it was wealth.

A third species of Incorporeal Property of a similar nature to the preceding is the PRACTICE of a professional man. When a professional man, such as a doctor or an attorney, has established a good reputation, the expectation of the future profits is a valuable property which may be sold, and is called a PRACTICE. Nothing is more common than for a young doctor or attorney to buy a practice. This is also the *emptio spei:* and is only another name for the goodwill of a business. It clearly lies wholly in the future, and is therefore Negative.

A fourth species of Incorporeal Property is the COPYRIGHT of a work of literature or art. When an author or an artist has produced a great work, the laws of all civilized countries give him the exclusive right to multiply copies of such a work by printing, engraving, &c., and receive the profits of their sale. This exclusive right is termed Copyright, and lasts for a longer or a shorter time in different countries. The books or engravings already printed are the corporeal results of past labour, but the Right to receive the future profits is incorporeal: this also is *emptio spei:* it lies wholly in the future, and is therefore Negative.

A fifth species of Incorporeal Property, which in recent times has attained colossal magnitude, is the SHARES in commercial companies of all sorts.

When persons unite to form a Joint Stock Company, they

each contribute a sum of money which is the result of past labour, and is called the CAPITAL of the Company. In exchange for this money, the subscriber receives a certificate that he has contributed so much capital, which gives him the right to share in the future profits to be made by trading in the proportion in which he contributed to the paid-up Capital.

And here it may not be amiss to say a few words as to the nature of shares in commercial companies. It might perhaps appear that the stock, or shares, in a Company, were identical with and represented the very money paid in as Capital. This, however, is an important error. In the first place it is clear that if the shares were merely *one* property with the actual capital, they never could exceed it in value. For if a man has merely the right to receive back the identical quantity of money be paid in, of course the share cannot exceed it in value.

But when a shareholder pays in money to form the capital of a company, the property in the money is gone from him in his individual capacity, and is passed to the company, which is a distinct entity from its individual members, and except in the extreme case of the dissolution of the company, a shareholder has no right to demand back any part of the original capital. The Share is nothing but the right to a proportionate share of the future profits.

Hence, we see that the shares in a company are purely incorporeal property: and that the money paid in and the shares, are two separate and distinct properties. The capital is corporeal, the shares are incorporeal, and therefore Negative.

A sixth species of Incorporeal Property is a PATENT, which bears the same relation to a mechanical invention that copyright does to a work of literature and art. The machines actually made are the produce of past labour, the Patent is the exclusive right to receive the profits to be earned by constructing and selling machines in the future.

There are several other species of Incorporeal Property, such as TITHES, which were the right to receive a certain portion of the produce of the earth, an estate in land, now commuted into a rent charge; GROUND RENTS, the right of receiving a sum

of money for the occupation of a certain space of ground; TOLLS, FERRIES, the right of demanding a payment for using them. These are all Rights to future products, and therefore Negative.

We now come to a species of Incorporeal Property of the greatest importance. It has already been seen that the total property in land consists of two distinct parts, the property in the past produce, together with the property in the future produce.

Now, a man exercising any profitable profession or business, is an Economic Quantity which bears in many respects a strong analogy to land. He may have accumulated a quantity of money the fruits of his past industry, but over and above his accumulated money he possesses his abilities, his character, &c., or his capacity to earn profits for the future. And of course he has a Property in the expected future products of his industry. Thus, the value of a man as an Economic Quantity consists in the Property in the products of his past industry, *together with* the Property in the products of his future industry, which, of course, are inverse and opposite to each other. And, as in the previous cases, if we choose for the sake of convenience to designate the one, money, as Positive, we may for the sake of distinction designate the other as Negative.

And there are two ways in which he may trade. He may buy goods by exchanging some of his property in money or the fruits of his past industry, or he may purchase goods, by giving the Right or Property to demand money at a future time, to be made by his future industry. This Property or Right to demand money at a future time is a species of Incorporeal Property called CREDIT or DEBT.

Now, as far as we have gone we have found the adaptation of the simple Negative Sign sufficient to explain the classification of Property. No one who has studied the Theory of the Negative Sign, as developed in comparatively recent years, can fail to see that the designation of Property in the future by the Negative Sign, for the purpose of contra-distinguishing it from Property in the past, is perfectly analogous to its use in Physical and Mathematical Science. A man's property in the future earnings of his industry is as clearly a part of his

property as his right to reap the future produce of his land. And he may sell and transfer the one as well as the other. But when a man comes to trade with this property, considerations of a more complex nature arise, and we must describe the *facts* in order to see how they are to be classified.

When a man purchases goods with his credit, or his promise to pay, the goods become his absolute property, just as if he had bought them with money. But exactly at the same instant that these goods become the property of the trader there is created in the person of the seller the Property or the RIGHT TO DEMAND payment for them at a fixed time, and also at the very same instant there is created in the person of the buyer the DUTY TO PAY for them at the fixed time.

By this operation a *Nexus* or *Contract* is created between these two persons. And this Contract contains within itself two distinct things, the RIGHT TO DEMAND and the DUTY TO PAY, and these two are manifestly inverse or opposite to each other, so that if the *Right to Demand* be Positive, the *Duty to Pay* is Negative. A Duty may manifestly be called a Negative Right, just as a *retarding* force may be called a *negative accelerating* force. And here at last we have found what it is that Mathematicians mean by calling a Debt a Negative Quantity, which we shall have to investigate at much greater length in a future chapter. A contract, therefore, comprehends two opposite quantities, the *Right to Demand* and the *Duty to Pay*, and as these are created simultaneously, and cannot exist separately, and can only be extinguished simultaneously, they bear an analogy to Polar Forces.

The RIGHT residing in the person of the creditor is always termed the CREDIT.

The DUTY residing in the person of the debtor is always called an OBLIGATION.

The word DEBT is applied both to the Right to Demand and the Duty to Pay, though it would certainly appear to be better to restrict it to the Duty to Pay.

When this contract is written on paper it is called indifferently an Obligation, a Credit, or a Debt.

Now the Duty to Pay must evidently always remain fixed in the person of the Debtor. But the Right to Demand, or the Credit, is the absolute property of the Creditor, and he may

sell or transfer it, like any other property whatever, and whenever it is so transferred, a Nexus or Contract takes place between the transferee of the Right or the Credit, and the original debtor, and it can only be extinguished by the revesting of the Right, or the Credit, in the person of the debtor whence it originally emanated.

The preceding remarks will be sufficient to give an outline of the nature of this property which in modern times has been developed into a colossal magnitude. The creation, circulation, and extinction of these credits is the most gigantic branch of modern commerce, and is fully examined in a future chapter.

The last species of Incorporeal Property is also of great magnitude in this country, and is of the same nature as the last. Not only may each individual purchase with the right to demand money, but the nation itself in its corporate capacity may buy money by giving in exchange for it a Right to demand future payments. These Rights are called the Funds, Stocks, or Public Debts, or Public Credit. We shall also have to examine the system of Public Debts hereafter.

On the Definition of VALUE.

19. Economic Quantities are, as we have seen, of three distinct species, each of which may at any time be exchanged for any of the others, giving rise to six different species of exchanges.

Now if at any time any Economic Quantity A can be exchanged for any other Economic Quantity B, then the quantity A is termed the VALUE of the quantity B; and B is likewise termed the VALUE of A. Now as each of the three species of Economic Quantities may be exchanged for either of the others, any quantity may have value in terms of the others. Suppose that at any time 1 oz. of gold will exchange for 15 oz. of silver, then it is said that 1 oz. of gold is of the value of 15 oz. of silver, which is simply the following equation:—

1 oz. gold=15 oz. silver.

Hence value may be said to be the sign of equality between

any two Economic Quantities, as Aristotle said, *Nicomac. Ethics*, iv., c. 3:—

Ἡ δ' ἀξία λέγεται πρὸς τὰ ἐκτὸς ἀγαθά.

"*Now the term* VALUE *is used in reference to* EXTERNAL GOODS."

So Digest, 36, 1, 1, 16.—Res tanti valet quanti vendi potest.

"*The Value of a thing is what it can be sold for.*"

We have then this definition:—

The Value of any Economic Quantity is any other Economic Quantity for which it can be exchanged.

Hence any Economic Quantity has as many values as quantities it can be exchanged for; and of course, if it can be exchanged for nothing, it has no value. This shews that there is no such thing as absolute value, or universal value, because there is nothing, probably, which can be exchanged universally throughout the world.

Now, without anticipating the General Theory of Value, which we shall have to investigate fully in the next chapter, we may observe that since a thing which cannot be exchanged has no value, it is not the person who offers a thing for sale who confers value on it, but the person who buys it. Hence, if a person wishes ever so much to exchange away his product, if no one will give him anything for it, it has no value; if an exchange takes place it can only do so from the reciprocal desire of two persons for some product or property of the other. Hence it is clear that *Value necessarily requires the concurrence of two minds.*

Value, therefore, by the very definition, like distance, or an equation, requires two objects. We cannot speak of absolute, or intrinsic distance, or equality. An isolated object cannot have distance, or equality. If we are told that an object is distant, or equal,—we immediately ask—Distant from what? or Equal to what? So it is equally clear that a single object cannot have value. If we hear of an object having value we must always inquire *Value in what?* And it is clear that as it is absurd to speak of a single object having absolute, or intrinsic, distance, or being an absolute or intrinsic equality, so it is equally absurd to speak of absolute, or intrinsic value. And as no single body can be a standard of distance, or equality, so no single object can possibly be a standard of value.

On the Definition of MONEY, CURRENCY, CREDIT, CIRCULATING MEDIUM, CIRCULATION.

20. There is one species of Economic Quantity of such great importance that we must devote some special attention to it—and that is Money and Credit.

In the primitive ages of the world we have abundant evidence that there was no such thing as money. When persons traded they exchanged the products directly with one another. Thus we have, Iliad, vii., 468:—

Νῆες δ' ἐκ Λήμνοιο παρέστασαν οἶνον ἄγουσαι
* * * * *
Ἔνθεν ἅρ' οἰνίζοντο κάρη κομόωντες Ἀχαιοί,
Ἄλλοι μὲν χαλκῷ, ἄλλοι δ' αἴθωνι σιδήρῳ,
Ἄλλοι δὲ ῥινοῖς, ἄλλοι δ' αὐτῇσι βόεσσιν
Ἄλλοι δ' ἀνδραπόδεσσὶ·

From Lemnos' isle a numerous fleet had come
Freighted with wine * * *
* * * All the other Greeks
Hastened to purchase, some with brass, and some
With gleaming iron; some with hides
Cattle or slaves.

The inconveniences of this method of trading are palpable. What haggling and bargaining it would require to determine how much leather should be given for how much wine; how many oxen for how many slaves! Some ingenious person would then discover that it would greatly facilitate traffic, if the things to be exchanged could be referred to some common measure of value. There are several passages in the Iliad and Odyssey which shew that, even while traffic had not advanced beyond barter, such a standard of reference was used. We find that various things were frequently estimated as being worth so many *oxen*. Thus, in Il. II., 448, Minerva's shield, the Ægis had 100 tassels each of the value of 100 oxen. In Il. VI., 234, Homer laughs at the folly of Glaucus, who exchanged his golden armour, worth 100 oxen, for the bronze armour of Diomede, worth nine oxen. In Il. XXIII., 703, Achilles offers as a prize to the conqueror in the funeral games in honour of Patroclus, a large tripod, which the Greeks valued among themselves at twelve oxen; and to the loser a female slave, which they valued at four oxen. And in the same book, 885,

Achilles stakes a spear and a caldron worth an ox. But it must be observed that these oxen did not pass from hand to hand like money. The state of barter still continued, as it is quite common at the present day, when the precious metals are used as money, to exchange, goods according to their value in money. Such a state of things in no way implied money or currency, or circulating medium.

The necessity for money arose from a somewhat different cause. So long as the things exchanged were equal in value, there would be no need for money. If it happened that whenever one man required the services of another, that other at the same time required an equivalent amount of service to be rendered in return, such transactions could take place with great facility, and the amount of services on each side being equal, there would be an end of the business. But it would often happen that when one man required the services of his neighbour, that neighbour would not require an equal amount of service at the same time, or even perhaps any at all. If, then, such a transaction took place between them, with such an *unequal* result, there would remain due a certain amount of difference, or amount of service due from the first to the second, and this would constitute a DEBT—that is to say, a Right, or Property, would be created in the person of the creditor to demand something at some future time from the debtor, and at the same time a Duty would be created in the person of the debtor, to pay that something.

The second would require, however, at some future time to have the balance of service due to him performed, and the debt discharged. Moreover, for his own security he would like to have some evidence, or memorial, to prove the debt, and accordingly he might require the debtor to give him some sign or token of the fact. A statement in writing acknowledging the debt, and promising to render the service due whenever called upon to do so, would be a natural form of such evidence.

We may now suppose that the second person has dealings with a third, and requires his services, but that the third has no immediate use for the services of the second, but requires those of the first. Now if the parties were so circumstanced, what would be more natural than for the second to transfer to the third the debt due to him from the first? A similar operation

might be repeated an indefinite number of times, and so this written obligation, or this evidence of a debt, enabling the possessor of it to demand some service to be rendered by the debtor, would pass from hand to hand, or be *current*; and from this use of it the thing itself has, by a confusion of ideas, come in recent times to be called a CURRENCY.

This Currency is nothing more than the evidence of service having been rendered for which an equivalent has not been received, but which may be demanded immediately or at some fixed time. It is obvious that, as soon as it has been rendered, the evidence of its being due must be given up to the debtor to be destroyed, as he has now discharged his duty, and as the right and the duty were created simultaneously, so they are extinguished simultaneously: and so this evidence will be no longer current. And if any man renders services to his neighbours he must in return receive either other services, or the evidence of their being due: and if he renders more services than he immediately requires in return, he will accumulate a store of this evidence for his future wants.

These simple considerations at once shew the fundamental nature of a Currency. It is quite clear that its primary use is to measure and record debts, and to facilitate their transfer from one person to another; and whatever means be adopted for this purpose, whether it be gold, silver, paper, or anything else, is a currency. We may therefore lay down as our Fundamental Conception that *Currency and Transferable Debt* are convertible terms; whatever represents transferable debt of any sort is *Currency*; and whatever material the Currency may consist of, it represents *Transferable Debt*, and nothing else.

The preceding considerations shew us that the idea of "Currency" is quite independent of that of "Money" which gives rise to new ideas, which we shall investigate very soon. It is quite possible to have a Currency, even though its most useful and general form Money, had never been thought of. If transactions take place between individuals, it is scarcely possible to imagine that there should not be debts, or balances of services arising from unequal exchanges between them, and this is the basis of a Currency. But it does not necessarily follow that there must be money. If the way of conducting commerce by means of money had never been invented, a grocer and a wine

merchant might trade with each other. If they agreed that a bottle of wine and a pound of tea should be considered as equivalents, the grocer might want so many bottles of wine, and if the wine merchant did not want so many pounds of tea, he might let the grocer have the wine, on his giving his promise, or pledge, to pay the tea when demanded. And this promise or pledge might pass through a hundred hands before the owner of it demanded the tea. It would perform exactly the same function as money in circulating goods.

Now this form of Currency is by no means so imaginary as might be supposed. It is said[1] that in the Ionian Islands it is customary in the oil trade for growers to grant oil bills, or notes, promising to deliver at a fixed term a stated quantity of oil at a certain price. So during the late civil war in America gold and silver specie disappeared from circulation, and private tickets of all sorts took its place. Instead of money, people had their pockets filled with bread tickets, milk tickets, and railroad tickets. If a man went to have his hair cut, and tendered a dollar, he could not get change, but he received so many tickets promising to cut his hair so many times. In one case we noticed in an American paper, payment was made in tickets promising to pay strawberries when the season came on. Thus the true nature of a Currency is revealed when gold and silver money disappear.

The very same thing is very commonly exemplified in this country. When the Post Office sells postage stamps for money, it promises to render a service in exchange for the money. These postage stamps are very commonly used as small change. Almost every one has occasion to send letters by the post, and therefore they are willing to receive them in exchange for small amounts of goods. Postage stamps are therefore a form of currency.

That this is the true *nature* of a currency is clear, but this was not the earliest *form* that it assumed. All nations, from a very early period, have felt the necessity of having something to represent and measure the debt that would arise from an unequal exchange; and they have invariably fixed on some material substance for this purpose.

[1] *Encyclopædia Britannica. Art. Ionian Islands, vol. xii., p. 446.*

Different nations have used different substances for this purpose. The Hebrews we know used silver; although no money was used at the period of the Homeric poems, copper skewers were sometimes afterwards employed as money in Greece, which were superseded by the silver coinage of Pheidon. The Ethiopians used carved pebbles, and the Carthaginians leather discs, with some mysterious substance sewed up in them. Throughout the islands of the Eastern Ocean, and many parts of Africa and India, shells are still used. In Thibet, and in some parts of China, little blocks of compressed tea serve as money. Salt is used in Abyssinia; and in the oasis of Africa a certain measure of dates, called a *hatia*, serves as a currency. In the last century dried cod was used in Newfoundland; sugar in the West Indies; and tobacco in Virginia served as money. Adam Smith says that in his day a village in Scotland used nails. In some of the American colonies powder and shot; in Campeachy logwood; and among the Indians of the North American continent belts of wampum served the purpose of a currency. It is said that in 1867 the proprietors in Virginia were reduced to such necessity as to use dried squirrel skins as currency. And no doubt many other things have been used by other nations.

But when we consider the purposes for which money is intended, it is easily seen that no substance possesses so many advantages as *metal*. The use of money being to preserve the record of services being due to the owner of it for any future time, it is clear that it should not be liable to alter by time. A money of dried cod would not be likely to keep very long, nor would it be easily divisible. One of the first requisites of money is that it should be divisible into very small fragments, so that its owner should be able to get any amount of services at any time he pleases. Taking these requisites into consideration, it is manifest that there is no substance which combines these qualifications so well as metal. It is uniform in its texture, and it can be divided into any number of fragments, each of which shall be equal in value to another fragment of equal weight; and if required, these fragments can always be reunited and form a whole again of the aggregate value of all its parts. By this means, if we can establish a relation between the quantity of the *metal* and the *amount* of the debt,

then whatever that relation be, or whatever quantity of metal be taken to represent any amount of debt, then any fragment of such metal will always represent a proportionate amount of the debt.

That this is the true nature of money has been seen by many writers, thus Aristotle says, *Nicomac. Ethics*, B. v. c. 5.

Ὑπὲρ δὲ τῆς μελλούσης ἀλλαγῆς (εἰ νῦν μηδὲν δεῖται, ὅτι ἔσται, ἐὰν δεηθῇ), τὸ νόμισμα οἷον ΕΓΓΥΗΤΗΣ ἐστιν ἡμῖν· δεῖ γὰρ τοῦτο φέροντι εἶναι λαβεῖν.

"*But with regard to a future exchange* (*if we want nothing at present, that it may take place when we do want something*) *money is as it were our* SECURITY. *For it is necessary that he who brings it should be able to get what he wants.*"

So an old pamphleteer in 1710 saw the same truth. He says[1]—"Trade found itself unsufferably straightened and perplexed for want of a general specie of a complete intrinsic worth as the medium to *supply the defect of exchanging*, and to make good the balance, where a nation, or a market, or a merchant demanded of another a greater quantity of goods than either the buyer had goods to answer, or the seller had occasion to take back."

So Baudeau, the Economist, whom we have already quoted says[2]—"This coined money in circulation is nothing, as I have said elsewhere, but effective titles on the general mass of useful and agreeable enjoyments which cause the well-being and propagation of the human race.

"It is a kind of a Bill of Exchange, or Order, payable at the will of the bearer.

"Instead of taking his share in kind of all matters of subsistence, and all raw produce annually growing, the sovereign demands it in money, the effective title, the Order, the Bill of Exchange."

So Smith says[3]—"A guinea may be considered as a bill for a certain quantity of necessaries and conveniences upon all the tradesmen in the neighbourhood."

So Mr. Henry Thornton says[4]—"Money of every kind is an order for goods. It is so considered by the labourer when he receives it, and is almost instantly turned into money's worth.

[1] *An Essay on Public Credit, p.* 25.

[2] *Introduction à la Philosophie Economique.* [3] *Wealth of Nations, B. II., c.* 2.

[4] *An Inquiry into the Nature and Effects of the Paper Credit of Great Britain, p.* 260.

It is merely the instrument by which the purchasable stock of the country is distributed with convenience and advantage among the several members of the community."

This great fundamental truth was also very clearly seen by Bastiat. He says[1]—"This is now the time to analyse the true function of money, leaving out of consideration the miners and importation.

"You have a crown piece. What does it mean in your hands? It is, as it were, the witness and the proof, that you have at some time done some work, which instead of profiting by, you have allowed society to enjoy, in the person of your client. This crown piece witnesses that you have rendered a service to society, and moreover it states the value of it. It witnesses besides, that you have not received back from society a *real* equivalent service, as was your right. To put it in your power to exercise this right when and how you please, society by the hands of your client, has given you an *Acknowledgment*, a *Title*, an *Order of the State*, a *Token*, a *Crown piece*, in short, which does not differ from titles of credit, except that it carries its value in itself (?), and if you can read with the eye of the mind, the inscription it bears, you can distinctly see these words '*Pay to the bearer a service equivalent to that which he has rendered to society, value received and stated, proved, and measured by that which is on me.*'

"After that you cede your crown piece to me. Either it is a present, or it is in exchange for something else. If you give it to me as the price of a service, see what follows: your account as regards the real satisfaction with society is satisfied, balanced, closed. You rendered it a service in exchange for a crown piece, you now restore it the crown piece in exchange for a service: so far as regards you the account is settled. But I am now just in the position you were before. It is I now who have done a service to society in your person. It is I who have become its creditor for the value of the work which I have done for you, and which I could devote to myself. It is into my hands therefore that this title of credit should pass, the witness and the proof of this social debt. You cannot say that I am richer, because if I have to receive something, it is because I have given something."

[1] *Œuvres, Vol. V., Maudit Argent, p.* 80.

So again he says[1]—"It is enough for a man to have rendered services, and so to have the right to draw upon society, by the means of exchange, for equivalent services. That which I call the means of exchange is money, bills of exchange, bank notes, and also bankers. Whoever has rendered a service, and has not received an equal satisfaction is the bearer of a warrant either possessed of value, like money, or of credit, like bank notes, which gives him the right to draw from society, when he likes, where he likes, and under what form he will, an equivalent service."

So again he says[2]—"I take the case of a private student. What is he doing at Paris? How does he live there? It cannot be denied that Society places at his disposal food, clothing, lodging, amusements, books, means of instruction, a multitude of things in short, of which the production would demand a long time to be explained, and still more to be effected. And in return for all these things which have required so much labour, toil, fatigue, physical and intellectual efforts, so many transports, inventions, commercial operations, what services has this student rendered to society? None: he is only preparing to render some. Why then have these millions of men who have performed actual services, effectual and productive, abandoned to him their fruits? This is the explanation:—The father of this student who was an advocate, a physician, or a merchant had formerly rendered services—it may be to the people of China—and had received not direct services, but RIGHTS to demand services, at the time, in the place and under the form which might suit him the best. It is for these distant and anterior services that society is paying to-day; and, wonderful it is! if we follow in thought the infinite course of operations which must have taken place to attain this result, we shall see that every one has been remunerated for his pains: and that these RIGHTS have passed from hand to hand, sometimes in small portions, sometimes combined, until in the consumption of this student the whole has been balanced. Is not this a strange phenomenon?

"We should shut our eyes to the light if we refused to acknowledge that society cannot present such complicated

[1] *Harmonies Economiques. Capital*, p. 209.
[2] *Harmonies Economiques. Organisation Naturelle*, p. 25.

transactions in which the civil and penal laws have so little part without obeying a wonderfully ingenious mechanism. This mechanism is the object of Political Economy.

"Another thing worthy of remark is that in this incalculable number of operations, which have combined to allow the student to live for a day, there is not, perhaps, the millionth part which have done so directly. The numberless things which he enjoys to-day are the work of men who long ago disappeared from the earth. And yet they were remunerated as they expected to be, although he who now profits by their labour has done nothing for them. He did not know them—he never will know them. He who reads this page, at the very moment he is reading it has the power, although perhaps he does not know it, to put in motion men of every country, and, I had almost said, of every time—white, black, red, and yellow. He makes generations already extinct contribute to his satisfaction, as well as generations yet unborn; and he owes this extraordinary power to the services his father had formerly rendered to other men, who, to all appearance, have nothing in common with those whose labour is now made use of to-day. Nevertheless, such a balance has been struck in time and space that each one has been paid, and received what he calculates he ought to receive."

It will be seen that these ideas of the nature of money are absolutely identical with the fundamental conception given by us. Now, let us ask, – Why do people take a piece of money in exchange for services or products? They can neither eat it, nor drink it, nor clothe themselves with it. They can make no direct use of it. The only use they can make of it is to exchange it away again for something else they want. And the only reason why they take it is that they believe, or have confidence, that they can do so whenever they please. It is, therefore, what is called CREDIT. As Edmund Burke says of gold and silver[1], "The two great recognized species that represent the lasting conventional CREDIT of mankind."

Hence we obtain the fundamental definition or conception of Creit:—

CREDIT *is anything which is of no direct use, but which is*

[1] *Reflections on the Revolution in France.*

taken in exchange for something else, in the belief or confidence that we have the right to exchange it away again.

Credit is, therefore, the Right or Property of demanding something else when we require it. It is the right to a future payment: and we must observe that Credit is not the *transfer* of something else, but it is the *Name* of a certain species of Property or Right.

Thus Ortolan says[1]:—"With respect to the first point of view, the personal Right is called by us *Créance;* by the Romans, *Nomen*, and less usually *Creditum*."

A metallic currency possesses a great advantage over the one we described at first which derived its current value from the belief and confidence of the persons who received it, that the debtor could perform his promise. That confidence would naturally exist only among his own neighbours, and at most among a comparatively small number of persons who had full opportunity of knowing the circumstances of the individual, and if the persons who took it had dealings with strangers or foreigners, who had no knowledge of the debtor, they would not receive such an obligation. The service denoted by such an obligation could only be demanded from the individual who gave it, and people in general would not be willing to give their services, when they could demand services in return from only one person. That person, too, might die, or become insolvent, which, of course, would destroy the value of his obligations. A metallic currency is free from these objections. Its utility was so evident to all persons who had commercial dealings, that they universally agreed to receive it in return for services. So that when a person receives an obligation expressed in metallic currency, he is able to command the services, not only of the original debtor, but also those of the whole industrial community.

There is clearly, then, no difference in principle between a metallic and a paper currency. A metallic currency is subject to its own peculiar disadvantages, because, by its constant wear and tear as it passes from hand to hand, it suffers considerably by abrasion, not to mention any bad practices that may be resorted to to lessen its weight, and as we have seen that the quantity or weight of the metal represents the amount of service

[1] *Généralisation du droit romain, Part II., tit.* 1.

the owner can command, as the metal decreases in weight, so does the amount of service it represents gradually and correspondingly diminish. Paper is not subject to this loss of material, so that if it were possible to have a paper currency based upon the same credit, and which should be as generally received as a metallic one, it would be a preferable form.

The paper currency we have described would in its simplest form have the particular service or product, it was intended to command stated on the face of it, as we have seen was done in the American War. This, however, would manifestly limit its utility, so by universal consent it is almost invariably the custom to make the paper currency of a country represent a certain portion of the metallic currency, which is the generally received power of commanding all services and products. Paper currency, therefore, in modern practice, instead of promising that the debtor will render any amount of particular service, almost always expresses that he will give a certain amount of metallic currency, either on demand or at some fixed time.

The preceding considerations suggest to us a principle which will be found to be of fundamental importance in Economics, and it will be seen that it is essentially requisite to bear it in mind, in all questions relating to money. It is this—WHERE THERE IS NO DEBT, THERE CAN BE NO CURRENCY. The debt represented the precise *inequality* of the exchange, and when there is no exchange, the debt must equal in value the service rendered. Hence, it is perfectly clear, that the use of currency is to supply the defect of the exchange, or rather, in most cases, to do away with the necessity for an exchange or barter.

It is hardly necessary to say that this is not the conception of the nature of money most usual among writers on Economics. The idea most prominently dwelt upon by most writers both on the Continent and in England is that money is the "instrument of exchange," or is the "medium of exchange." The principal writers on Economics consider money as an intermediate merchandize used for the purpose of effecting indirect exchanges. This was the conception established by the Physiocrates, and generally adopted by Economists since them. J. B. Say calls a transaction effected by money a demi-exchange. So M. Joseph Garnier[1] says that direct barter ceases as soon as nations emerge

[1] *Eléments de l'économie politique*, 3rd edit., p. 14.

from the infancy of civilization. In civilized countries such cases are rare, and often impossible. Thus a bookseller who has nothing but books, can but rarely pay his baker, or his shoemaker with books. A certain peculiar species of merchandize has, therefore, been devised called money, which the buyers of books give to the bookseller, and which he can give again to these who sell to him. Thus, he says, barter is complicated by an intermediate exchange. This money, men have agreed to make of silver, and of gold; and in civilized countries, the shoemaker exchanges his shoes for their equivalent in money, for the purpose of again exchanging this money for a hat, it may be. The operations of the hatter are similar, and they may be represented thus:—

The shoemaker

first exchanges his *shoes* for *money*, then exchanges the *money* for a *hat*, which is equivalent to exchanging the *shoes* for a *hat*.

The hatter

first exchanges a *hat* for *money*, then the *money* for *shoes*, which reduces the operation to an exchange of a *hat* for *shoes*.

Such is the view of the matter hitherto generally adopted, and it may perhaps seem somewhat captious to reject a conception sanctioned by so great a concurrence of authority. Moreover, allowing that either conception is correct, it may seem to many indifferent which ought to be adopted. We think, however, that a careful consideration of the two proposed conceptions will shew that the one we have adopted is manifestly the more rigidly accurate of the two. But the true reason why we give the preference to it over a conception so long established, is one which has prevailed in many other sciences, and has conclusively shewn which is the true fundamental conception of the science. It is this—that although the simple phenomena of monetary science may be explained equally well by adopting either conception, yet, when we come to the higher and more complicated phenomena, they are wholly inexplicable if we adopt the conception of money as being an intermediate merchandize, as the *fundamental* and primary one. If there never had been any but a metallic currency, the old conception would

have sufficient, and it is capable of explaining all phenomena in which metallic currency only is concerned. But in modern times an engine of much more complicated nature has been devised, namely, *Credit* or *Paper Currency*. Now our reason for rejecting the common conception of money as the primary and fundamental one, is that it is wholly incapable of solving the more intricate and important problems in paper currency, But by adopting the conception of money we have proposed as the primary and fundamental one, the whole theory of Credit and Paper Currency can be constructed, and all their phenomena be explained. A very good proof of the correctness of these remarks is, that no writer who has adopted the older conception has ever attempted to solve the more intricate problems in the theory of paper currency, or even seems to be aware of their existence. The most stupendous calamities have been brought about by founding a paper currency in contradiction to our fundamental conception, as will be shewn in a future chapter.

The force of this reasoning will be apparent to any one who considers several analogous cases in other sciences. Thus the definition of an angle given by Euclid serves well enough for the purposes of geometry, but is quite inadequate for those of trigonometry. Consequently the conception of an angle in trigonometry is quite different from the one hitherto adopted in geometry. The fundamental conception of the central position of the earth was capable of explaining many of the simpler phenomena of astronomy, but being inadequate to explain the more complicated ones, it was rejected in favor of heliocentric one. So the corpuscular theory of light was superseded by the undulatory theory for the very same reason. Exactly the same course of reasoning leads us to prefer the fundamental conception of money as being the *Representative of Debt* to that of its being the *Medium of Exchange*.

And we have shewn that many writers have observed this already, but they have not appreciated the full value of the conception. They have not sufficiently seen that Money and Credit are homogeneous quantities, and that Money is only the highest and most general form of Credit. A Right to demand something from an individual has only particular value, and as the individual may not be able to render that something, its value is precarious, but as money is exchangeable among *all*

persons, at *all* times, and in *all* places of the same country, its value is permanent and general.

Of Currency *or* Circulating Medium.

21. Having thus examined the function of Money and Credit, and shewn that the latter is a species of exchangeable property, of the same nature as, but inferior in degree to, money, we have now to consider the words "Currency," and "Circulating Medium," which have given rise to protracted controversies in comparatively recent times, and we take them together, because all writers use them as absolutely equivalent.

To call money by the name of currency is one of the most extraordinary abuses of language that has ever occurred. In old times men used to speak of money being current, as it passed from hand to hand. Hence arose the expression the *currency* of money. So late as the case of *Miller* v. *Race* in 1750, Lord Mansfield says of money that it cannot be recovered after it has passed in *currency*, but before money has passed "in currency" an action might be brought for it. He says the same of a bank note: an action could not be brought for it after it was paid away in *currency*. Hence the word currency was manifestly applied to a certain peculiarity of money,—namely, its passing from hand to hand. But about the beginning of the last century by a most extraordinary confusion of ideas, and, as far as we have been able to discover, it arose in our American colonies, the money itself was called currency. This name occurs but rarely in Smith, but since his time has become very common.

To shew the extreme absurdity of this name, we have only to consider a few similar cases. Nothing is more common than to say that such an opinion, or such a report is current, and we speak of the *currency* of such an opinion, or such a report. But who ever dreamt of calling the opinion, or the report, itself, *currency?* It is very common to speak of the currency of the Session of Parliament—but who ever dreamt of calling the Session itself *currency*?

Now, how can it be more rational in a scientific sense to call money currency, than to call a report, or an opinion, or the Session of Parliament, currency?

Such as it is, however, this Yankeeism is far too firmly fixed in common use to be abolished: and hence we must now accept it, and shew how it arose, and ascertain what in a scientific sense it includes.

The word "current" came to be applied to money, from the following peculiarity of English Law.

If a person steals any of my goods such as books, furniture, a horse, &c., and sells them to another person who buys them innocently without knowing that they have been stolen, the thief can transfer no property in the goods, unless the sale be made in market overt. That is, if I find my goods in any other person's possession, I may reclaim them, even although that person bought them for a fair price, and did not know they were stolen, unless they were sold in market overt. But if they were bought in market overt, then the buyer may retain them against the true owner even though they were stolen.

But to this rule of English Law money was always an exception. If the true owner of money which has been stolen finds it in the hands of a thief he may recover it, but if the thief has purchased things in a shop with it the shop-keeper who takes it honestly in the course of his trade may retain it against the original owner, that is, as Lord Mansfield said, money cannot be recovered after it has been paid away in currency.

The true peculiarity of money, then, which was denoted by the word currency, was that the property in it passed by delivery.

And when the substitutes and representatives of money, such as Bills of Exchange and Bank Notes, came into use, it was found necessary for the benefit of commerce, to apply the same doctrine to them. The custom of negotiating Bills of Exchange grew up and flourished among merchants for upwards of three centuries, before any case arising out of them came before a Court of Law. In course of time the Common Law adopted the *Lex Mercatoria*, or custom of merchants, and by it Bills of Exchange were treated like money, in so far as this, that the property in them passed like that of money. Thus, if they were stolen, though the true owner might recover them if he found them in the hands of the thief, yet if the thief had passed them away for value to an innocent holder in the course of business, that innocent holder acquired the property in them, and might retain them against the true owner, and enforce

payment from all the parties liable. Thus Bills of Exchange were assimilated to money in this important respect, that, even though stolen, when they had once been passed away in currency, the property in them belonged to the person who had innocently purchased them.

The same rule holds good with regard to all commercial paper. Hence the word "currency" is applicable to money, and all instruments of credit: and until very recent times, money and all forms of credit were included under the word currency. A difference of opinion, however, on this point has sprung up in modern times which has had very important legislative consequences, which will demand our most serious attention hereafter.

The expression *Circulating Medium* came into use about the last decade of the last century, and is a far more correct expression. The circulating medium is manifestly the medium by which the circulation of commodities is effected, and clearly, by the very force of the definition, includes money and credit of all sorts. The metallic currency is termed money, and the paper currency of all sorts is termed *security for money*. These securities for money, or the paper currency, are divided into two general species, first, *promises* to pay money called PROMISSORY NOTES, and secondly, *orders* to pay money, called BILLS OF EXCHANGE. Each of these general divisions has several varieties, which are treated of in a subsequent chapter.

The paper currency represents a pledge for a future payment, exactly as money does. The latter, however, is always a pledge payable on demand. In the case of paper, this pledge is frequently not payable on demand, but at a fixed period after its creation. Now, it is clear that, though the period of payment is deferred, it cannot alter the fundamental nature of the instrument. It may affect its value, and its negotiability, or facility of transfer, but it cannot affect its essence. A pledge to pay in three months' time is clearly of the same nature as a pledge to pay on demand, nor does it in any way signify whether it is recorded on paper, or exists merely in the abstract form of a debt.

The word currency itself is a complex term involving two simple ideas. From its first representing a debt, its fundamental idea was that it was something that denoted power of demanding services, and secondly, it also passed from hand to

hand itself. Of these two ideas it must be especially observed that the former is the fundamental one, but it has received its *name* from the latter. Resolved into these ideas it denotes—

1. That which *circulates* commodities, *i. e.*, which causes commodities to circulate, where circulate is an *active* verb.

2. That which *circulates* itself, where circulates is a *neuter* verb.

From the first of these ideas is derived the term *Circulating Medium*, and from the second *Currency*.

The term *Circulating Medium* does not occur in Adam Smith: nor is it used in a pamphlet published in 1793 on the commercial crisis of that year, where it would naturally have been employed if it had been in common use. The first instance we have been able to discover of its having found its way into print, is in the year 1797, when we find Mr. Fox complaining[1] that "circulating medium" was a novel term, whose meaning was not very well settled.

We have observed above that the word "circulate," like many other verbs, has both an active and a neuter sense. Smith uses it in both senses in different places. Thus he says[2] "Their (gold and silver) use consists in *circulating* commodities." So also he says afterwards[3]—"The great wheel of circulation is altogether different from the goods which are circulated by means of it. The revenue of the society consists altogether in these goods, and not in the wheel which circulates them." A little further on he speaks of the different sorts of paper money, but he says the *circulating* notes of banks and bankers are the species which is best known. In these two sentences the word *circulate* is used in two different senses. In another place he says, "The only use of money is to circulate goods." In the following sentence both senses occur:—"Let us suppose, for example, that the whole *circulating* money of some particular country, amounted at a particular time to one million sterling, that sum being then sufficient for *circulating* the whole annual produce of their land and labor." And so in this sentence, "When we compute the quantity of industry which the *circulating* capital of any society can employ, we must always have regard to those parts of it only which consist in provisions,

[1] *Parl. Hist. Vol.* xxxiii., *p.* 342.

[2] *Wealth of Nations, B.* ii., *c.* 1. [3] *Ibid. Book* ii., *c.* 2.

materials, and finished work; the other, which consists in money and which serves only to *circulate* those three, must always be deducted."—"What is the proportion which the *circulating* money of any country bears to the whole value of the annual produce *circulated* by means of it, it is perhaps impossible to determine." Hence, we observe that the word to "circulate" was used in both senses by Adam Smith, though he does not use the expression circulating medium.

In the pamphlet of 1793, though we do not find the words in actual conjunction so as to form one expression, we yet have the idea. Thus, the writer speaking of the enormous trade Great Britain says, "The *medium* by which this extensive trade has been conducted is paper credit; a medium which alone is equal to the emergency of so quick and so remote an intercourse." In a subsequent sentence he says, "The enormous but unsubstantial capital by which the productions of the world were so expeditiously *transferred* from region to region sinks in a moment to a few hard guineas." Now, it is quite evident that the expression "*circulating medium*" is merely the essence of these two sentences.

But the ordinary meaning of words in scientific language leaves no possible doubt as to which of the two senses of "circulate" is the true one in the expression "circulating medium." A *medium* in scientific language invariably means some middle thing, by or through which something else is done. Thus, we speak of a medium of communication, being some one, or some thing, through whom or through which, something is communicated from some one to some one else. So a circulating medium must mean a medium of circulation, through or by means of which something else is circulated. If we are to interpret the word circulating as that which circulates itself, we may substitute some other words of equivalent meaning in the expression, and it comes to this that the circulating medium means the "travelling middle," which reduces the expression to absolute nonsense. In a philosophical sense, then, it is perfectly certain that the expression "circulating medium" does not mean the itinerating medium, or the medium which necessarily circulates itself, but the medium that circulates commodities. And this was beyond all doubt the meaning attributed to it, at the time it originated.

The amount of the currency, or circulating medium, in any country is the aggregate amount of it belonging to every individual. Now whatever represents the amount of debt due to any individual, over and above his possessions in commodities, in whatever form that debt may be recorded, whether metal or paper, or whether it exists simply as a debt, is the amount of currency belonging to him. Adopting this definition, we may enumerate the different species of currency as follows :—

1. Coined money: gold, silver, and copper.

2. The paper currency; *i. e.*, promissory notes and bills of exchange, with all their varieties.

3. Simple debts of all sorts; such as credits in bankers' books, called deposits, book debts of traders, and private debts between individuals.

It is obvious that there is no distinction in principle between the two latter species. They each denote that a transfer of some sort has taken place, and are a title to future payment. As a matter of convenience some of these are recorded on pieces of paper. It is certainly true that some of these descriptions of currency are more eligible and secure than others, and perform the same duties with different degrees of advantage. The metallic currency rests upon the credit of the State, that it is of the proper weight and fineness, and the universal readiness of people to receive it in return for services. Paper currency, in this country at least, rests entirely upon private credit, and is of all degrees of security, from a Bank of England note down to a private I O U. These different species of currency, therefore, though they possess different degrees of circulating power, though they may be more or less eligible or secure, represent but one fundamental idea—DEBT. From these considerations it follows that the amount of currency, or circulating medium, in any country is the *sum total of all the debts due to every individual in it.*

We shall, therefore, use the terms "currency," and "circulating medium," in this work, as absolutely identical, and coextensive, the latter being founded upon its fundamental conception of circulating itself. It is true that the former is considerably the older term, and is derived from that portion of the circulating medium, which was most frequently thought of. Some persons, too, might be a little startled at first, at seeing such an

extension given to the word "currency." But it is merely an instance of what has repeatedly happened in other sciences, that names have been given to substances from some particular quality in them, which first attracted attention, and it has been afterwards discovered that that was not their fundamental idea, and the class has been extended, through the exigences of science, to include other things which have no trace of the quality, whence it derives its name. We may mention as familiar instances, two cases in geology, and chemistry. In geology the term "oolite," was first applied to rocks which resembled the roe of a fish, but the necessities of science compelled geologists to class certain other formations which have no resemblance to roe, under the term of oolite, and such classification is universally adopted. So also "white chalk may be yellow, green, or black, and is actually of these colors in some places, but notwithstanding these stains upon its character, it is still called "white" by courtesy."[1] So the term "combustion" was applied to certain phenomena in chemistry, on account of heat being developed during the process. But a deeper knowledge in chemistry disclosed that it was merely the process of oxygen combining with some other substance, and the quality of the evolution of heat was accidental, and that there are cases of the combination of oxygen with substances where no heat is developed. And yet these are classed under the term combustion. Thus, the rusting of iron is merely the process of oxygen combining with it chemically, and is classed as combustion, though no heat is developed. So the word acid has received an extension which includes many things which are not *sour*. To say, then, that private debts are to be classed under the term currency, can be no stumbling-block for an instant, to any one who considers these analogous cases. It is merely an example of what has repeatedly happened in other sciences, when more correct views were entertained of the proper classification of their objects.

It would be quite easy to multiply instances of a similar necessity which have occurred in many other sciences, but the ones we have given are sufficient for the purpose. "Descriptive names," says Dr. Whewell[2], "although they might be supposed

[1] *Quarterly Review, vol.* xcv., *p.* 393. *See also Whewell's Phil. Ind. Sci. for other examples.*

[2] *Hist. of the Inductive Sciences, vol.* iii., *p.* 433, *edit.* 1857.

to be the best, have, in fact, rarely been fortunate. The reason of this is obvious:—the mark which has been selected for description may easily fail to be essential, and the obvious connection of natural facts may overleap the arbitrary definition. . . . The signification may assist the memory, but must not be allowed to subjugate the faculty of natural classification."

It is most particularly to be observed that it is the essential quality of currency, that it is a general charge of debt upon the person of the debtor, or obligant; and is not a title to any specific or particular articles. In all cases whatever it involves the idea of personal liability. Thus, in page 188, where the wine merchant is supposed to take the grocer's promise to pay a half pound of tea when required in return for the wine he lets him have, it must be distinctly remembered that this is a general power to demand so much tea from him, and is not a particular appropriation of any specific quantity of tea. The whole of the grocer's stock of tea remains his own property until the demand is made upon him for payment. Consequently he can sell or dispose of it all if he pleases, which he could not do if any particular part was set aside as the property of another person, and he was merely the keeper of it.

This distinction is of the utmost importance, and it serves to shew that the transferability from hand to hand is not the fundamental conception of a currency. There are certain commercial documents which bear a resemblance to Bills of Exchange, in respect of their being transferable from hand to hand, and are supposed to be of the same nature. These are Dock Warrants and Bills of Lading. When property is deposited in the docks, the owner of the dock grants a receipt for it, and this, for the convenience of commerce, is assignable at will, and whoever is the holder of it is the owner of the property. So, when a ship is loaded for a foreign port, the shipmaster grants receipts for the goods on board of her, and these "Bills of Lading" may be sold fifty times before the actual property is demanded. Both Dock Warrants and Bills of Lading are merely the titles to certain specific goods, warehoused in the dock or on board ship, and involve no personal liability or debt. On the other hand, a Bill of Exchange is purely a charge of debt upon some particular person. It is expressly contrary to the fundamental conception of a Bill of

Exchange that it should be an appropriation of any specific funds. If a document purporting to be a Bill of Exchange is a specific appropriation of any particular funds, it immediately ceases to be a Bill of Exchange.

The great importance of distinguishing between the fundamental conception of Bills of Exchange, and that of Bills of Lading and Dock Warrants, may probably not be apparent at present; but it will fully appear hereafter. Some most dangerous and fatal ideas on the subject of Credit are founded upon confounding the two things. One thing only we will note at present,—that Bills of Lading and Dock Warrants can never exceed in quantity the property they represent, but that Bills of Exchange greatly exceed the quantity of coin they profess to represent, because they do not represent any particular coin, but they are only an engagement that a person shall have the money at some given time, and it is quite possible that the same coin may discharge a hundred Bills of Exchange in succession.

It is of such great importance to fix the preceding classification and distinctions in the mind, that we will illustrate them further by quoting from Dr. Whewell [1], a conversation between Linnæus and one of his pupils, Giseke, which presents an exact analogy to the views we are seeking to enforce. Giseke was much puzzled by being unable to see the intelligible grounds upon which Linnæus proceeded in his collection of natural orders. He narrates a conversation which he held with the great teacher upon the subject, which presents the most striking points of similarity with the preceding paragraphs. Giseke began by assuming that an order *must* have that attribute from which its name is derived, that the *Umbellatæ* must have their flower disposed in an umbel; the mighty master smiled, and told him *not to look at names, but at nature.*

"*Giseke.*—But what is the use of the name if it does not mean what it professes to mean?

"*Linnæus*,—It is of small import what you call the order, if you take a proper series of plants, and give it some name, which is clearly understood to apply to the plants, which you have associated. In such cases as you refer to, I followed the logical rule of borrowing a name *a potiori* from the principal member. Can you give me the character of any single order?

[1] *Hist. Ind. Sc., Vol. III., p.* 270, *Edit.* 1857.

"*Giseke.*—Surely the character of the *Umbellatæ* is that they have an umbel?

"*Linnæus.*—Good, but there are plants which have an umbel and are not of the *Umbellatæ*.

"*Giseke.*—I remember; we must, therefore, add that they have two naked seeds.

"*Linnæus.*—Then *Echinophora*, which has only one seed, and *Eryngium*, which has not an umbel, will not be *Umbellatæ*, and yet they are of the Order. Both are beyond dispute *Umbellatæ*."

Let the reader of this work thoroughly imbibe the spirit of the preceding conversation, and carefully observe that we must look beyond names to the nature of the objects we are treating about, for a proper classification of them. Just as there were plants which had no umbel, and yet were of the order *Umbellatæ*; so, though private debts are not current, yet still they are *Currency*; and as there were plants which had umbels, and yet were not of the order *Umbellatæ;* so also dock warrants and bills of lading, although they are current, are yet *not* currency.

22. We must now demonstrate a proposition of the greatest importance in Economics, and on which errors of the most serious nature are very prevalent. It is this:—

The quantity of money in any country bears no necessary relation whatever to the quantity of other goods, &c., in it, or to their price.

Many writers on Economics have supposed that the quantity of money in a country bears some necessary relation to the quantity of commodities in it; many more think that the prices of commodities are determined by the proportion which the quantity of money bears to the quantity of commodities. That this is a very grievous error may very easily be shown. Let us suppose that A and B are reciprocally indebted to each other for the sale of goods. Let us suppose that A has bought goods from B to the amount of £10, and B has bought goods from A to the amount of £13. Then it is quite clear that there are three different ways of settling their dealings:

1. Each may send a clerk to the other to demand payment in full of his debt. This method would require £23.

2. A may send £10 to B to discharge his debt, and B may send it back to A with £3 more to discharge his debt. This method would require £13.

3. They may meet and set off their mutual debts against each other, and pay only the difference in coin. This method would require only £3.

Now it is quite clear that a very different quantity of money would be required to carry on any given amount of business, according as either of these three methods was adopted. Between the first and the third, there is a difference of £20, but there would be no difference in the prices of commodities. These £20 would not influence prices, but be required to settle debts in a clumsy way. So it is clear that by a simple change in the method of doing business, £20 may be withdrawn from circulation altogether, and applied to new transactions.

From these considerations it appears that there may be large quantities of money in a country which may exercise no influence on prices, and the proportion between money and commodities may vary greatly, according as one or other of these methods of doing business is adopted. Now if a country which habitually adopted the first method, were to change its custom and adopt the *third*, it is perfectly clear that a very large quantity of money would be disengaged from circulation, and may be applied to promote new operations, and therefore in all its practical effects it would be an addition to the previously existing quantity of money. Hence the various methods of economizing the use of money are to be considered as an increase of the resources of the nation. If by an improved method of doing business we can dispense with £500,000 in settling transactions, that is equivalent to adding that sum to the resources of the nation. It is one of the great functions of a bank to promote such a change of doing business, and to bring people together to balance their mutual debts without the intervention of money, and it will be shewn in a subsequent chapter how greatly the skilful employment of much methods economizes and developes the national resources.

On Circulation.

23. When commodities, &c., are interchanged directly for one another it is called Barter, or Exchange. When commodities are interchanged for money, that money is only taken in order that it may be interchanged again for something else. Hence,

J. B. Say aptly said, that when money is used, the transaction is the *half of an exchange*, which is true. It is also called a SALE. A *Sale* always denotes a transaction in which one of the quantities exchanged is money or credit, that is, when one quantity is a useful commodity, and the other only the right to demand one; that is, when the interchange is of things of an unlike nature. An *Exchange* is always an interchange of things of a like nature, either commodities for commodities, or currency for currency. Thus we speak of the Foreign Exchanges, or the value of the currency of one country in terms of the currency of another; or we ask for the change (*i.e.*, the 'change or exchange) of a £5 note or a sovereign; so we speak of exchanging a picture for a statue, or one book for another. When the interchange is of commodities for currency, the one who gives currency is said to BUY the commodity, and the one who gives the commodity is said to SELL it. Thus we buy a horse or a house with currency. An officer buys a commission in the army, but he *exchanges* from one regiment to another. So in Lear (Act v., Sc. 3), when Albany throws down his glove to the traitor Edmund, the latter, throwing down his own, says, "There's my exchange," meaning like for like. And, a little further on in the same scene, Edgar says to his wicked brother Edmund, "Let's exchange charity." So in Hamlet (Act v., Sc. 2), Laertes says—

"Exchange forgiveness with me, noble Hamlet."

A transaction in which currency is given for commodities is, as just said, a *Sale*. The sum total of these sales is properly termed the CIRCULATION. Hence a single piece of money may add considerably to the circulation, for every time it is transferred it is an addition to the circulation, though it is no increase to the currency. We must observe that the word *Circulation* is often used in a very corrupt sense, as being synonymous with money and bank notes, more particularly the latter. Thus the number of notes issued by the Bank of England, or any other bank, is frequently termed its *Circulation*, more especially by American writers, from whence we believe the absurdity of calling money currency originated. Of all the terms in common use this is one of the most objectionable. To call the notes which circulate *circulation*, seems as great a confusion of ideas, as to call a wheel a *rotation*. We shall accordingly never use the word circulation to mean the amount of issues of a bank, the

correct expression evidently is to say, the number of its *notes in Circulation*. We shall always use the words currency and circulation to mean different things; the former to denote the substance itself, the second the amount of its transfers from hand to hand. It is also clear that the currency and the circulation do not bear any fixed relation to each other, for there may be a large amount of currency in a country, yet, if the industrial operations be few, there will be a small circulation. On the other hand there may be a small amount of currency, but if the people be active and industrious, it will pass frequently from hand to hand, and there will be a large circulation.[1]

As the use of the currency is to set industry in motion, and inasmuch as it has no use except so far as it does that, its beneficial effects are not to be measured by its actual amount, but by the quantity of industry which it generates. Money lying locked up in a box cannot increase of itself, and only represents *latent* power and not actual power. It may be called power, or wealth in the latent state, and resembles the steam engine of a mill which is not going, and is of no use unless it is set in motion: and as the produce of the mill is measured by the quantity of the motion of the engine, so is the useful effect of the currency measured by the quantity of its motion, which we have called the *circulation*. Now, as this circulation, which is the sole test of its useful effect, is the product of its amount multiplied into the velocity of its circulation, it is clear that if by any means we can increase the rapidity of the circulation of the existing currency, it will add greatly to its beneficial power, or if only a certain amount of business can be done, we may diminish the quantity of currency necessary to carry it on by increasing its rapidity of circulation. Engineers usually call the quantity of the motion of the engine its *duty*, so we may call the circulation of the currency its duty.

It is so essential to have a clear conception of the useful effect produced by any given amount of currency, that we may add another illustration. The effect produced by any body in motion is determined, not only by its weight or mass, but also by its velocity, and is called its *momentum*. If the mass be diminished, yet by increasing the velocity, the result or mo-

[1] *See also Verri, Meditazioni sulla Economia Politica*, § xvii; *Condillac suprà, p.* 96: *Le Trosne, De l'interêt social, p.* 908, 915.

mentum may still be the same. Thus, if a body of 100 pounds weight move with a velocity which we may call 1, its momentum will be 100; now, if we diminish the weight to 50, and can double the velocity, the effect or momentum will still be 100, the same as before. The operation of the currency is precisely analogous to this. Its useful effect is the result of its combined amount and rapidity of circulation, which we have called the CIRCULATION. If we can make £50 circulate with twice the rapidity that £100 did before, the useful effect, or circulation, will be the same. Thus, the circulation of the currency may be aptly compared to the momentum of a body; hence, we may say that the circulation is the momentum or duty of the Currency.

As the useful effect, or the industrial operations promoted by the currency, does not depend solely on its amount, we may see how impossible it is to form any estimate of the wealth of a country by the amount of money, or gold and silver in it. One country may abound in gold and silver, and yet be poor; and another may have comparatively little, and yet be rich. Spain was a country in which, at one time, gold and silver were more plentiful than any other in Europe, and yet the more gold and silver were poured into it, the poorer it became. Adam Smith says that, except Poland, it was the poorest country in Europe. On the other hand, Scotland is the country which has the least amount of gold and silver currency, with the greatest comparative amount of wealth. The quantity of gold and silver currency in France is much greater than in England, and yet England is much the wealthier country of the two, and there are good grounds for believing that the proportion of money to industrial operations in England considerably exceeds that in Scotland. These examples shew that the comparative amount of visible currency in different countries is no evidence whatever, of the comparative wealth of those countries; on the contrary, it may be a proof of waste of wealth, that is a waste of resources which might be better employed.

The subtle question whether, if a fair exchange of goods were substituted for payment in money, it was to be considered as a sale, was warmly debated for 150 years by the two famous sects of Roman lawyers, the Proculians and the Sabinians, from the time of Augustus to that of Hadrian. Both parties appealed to

Homer in support of their views, but the opinion of Proculus finally prevailed, that a *sale* and an *exchange* are operations essentially distinct in their nature. This was confirmed by the Emperors Diocletian and Maximian, and was ratified by Justinian.[1] The conclusion was just, though the reason assigned for it is scarcely satisfactory, that "in the exchange of two things, it can never appear which has been sold and which has been given as the price of the thing sold, and it is contrary to reason that each should appear to have been sold, and that each should appear to have been given as the price of the other." It would rather appear that when we exchange one commodity for another, we exchange one whose useful qualities are known, for another whose useful qualities are also known; that is, we exchange two things which are acknowledged to be equivalents. But the currency represents an abstract quality or right. In changing a commodity for currency we commute a known useful quality for an abstract right; that is, we give a commodity and receive in return only the power of obtaining an equivalent; or we exchange something that is definite for another that is indefinite, two operations which are essentially distinct, and it is better to appropriate different expressions to operations of a different nature.

On Price, Discount, *and* Interest.

24. When one Economic Quantity is exchanged for another, each is termed the value of the other. But when one of the Economic Quantities exchanged is money or credit, the sum of money or credit receives a peculiar name. It is called the Price of the other. From the considerations presented in § 19, it appears that price is the same thing as value in money, or credit. But, as it is invariably the custom in modern times to estimate the value of every commodity by its value in money or credit only, or its price, and not by its value as regards other commodities, the words value and price have become almost identical and interchangeable expressions, though no doubt we must remember the technical difference between them. The price of any commodity is therefore the quantity of money, or credit, given in exchange for it, at any moment.

[1] *Institutes, L. III., tit.* 24, §2.

Now, as the value of the money is the commodity received in exchange for it, it is manifest that the greater the quantity of the commodity received for it, the greater is the value of money. Or if the quantity of the commodity be fixed, the value of money is greater, as *less* money is given for the commodity. Hence it is clear that *the value of money varies inversely as price.*

The value of the property called debt, or credit, is however estimated in a peculiar way. We have taken the sum of £100 payable one year hence as the unit of debt. The negociation of debts is a branch of modern commerce of supreme importance. Now a debt of £100 payable one year hence, being a saleable commodity like a quarter of corn, the sum given for it is its price, just as we speak of the price of anything else. And of course the value of money rises as the price diminishes. Now as money naturally produces a profit, it is clear that the price given for a debt payable a year hence must be less than the *amount* of the debt. The difference between the *price* of the debt and the *amount* of the debt is called DISCOUNT. Therefore, clearly the price together with the discount equals the amount of the debt; and as the price decreases the discount increases. Hence, as the discount increases, the value of money, or the price, increases also. Now in estimating the value of debts it is universally the custom in commerce to mention the *discount*, and not the price; and to buy or purchase a debt is always in commerce termed to *discount* it. Now, if a banker buys a debt of £100 payable a year hence for £95, it is manifest that the discount is £5, and he is said to *discount* it at 5 per cent. per annum. Should the price of debts fall, the discount rises; and since the value of money varies inversely as price, it varies directly as discount.

Hence we have this:—

The Value of Money varies inversely as Price, and directly as Discount.

To discount a bill of exchange at 5 per cent. means to give a price for a debt in the proportion of £95 for every £100 of its amount payable one year hence.

The expression, however, that the value of money varies directly as discount is sometimes misinterpreted. Thus it is often said that if the price of debts has fallen from £96 to £93,

and therefore the discount rises from £3 to £6, the value of money has doubled. This, however, is erroneous. Debts which formerly sold for £96 now sell for £93; and, therefore, it is clear that the value of money has risen in the proportion only of 93 to 96, and not doubled.

When a person advances money to another, and agrees to defer receiving the profit until the end of the year, the profit is termed INTEREST. If he lends, as it is called, £100 at 5 per cent. interest, he in fact pays £100 down for the purchase of a debt of £105, payable at the end of the year, and the £5 is the interest.

This method of making profits, though not uncommon among private persons, is never used in banking. Bankers invariably subtract the profit agreed upon at the time of the advance. Thus they always make profits in advance. In this case the profit is termed DISCOUNT. Thus, if a banker discounts a bill of £100 at 5 per cent., he only pays his customer £95, and retains the £5 at the time of the advance, as profit. In reality he pays £95 down for the purchase of a debt of £100, payable a year after date; and the £5, or the difference between the price of the debt and its amount, is the *discount*, and his profit.

It is manifest that this latter method of trading is the more profitable, because in the former case he makes £5 profit on the actual advance of £100; in the latter case he makes £5 profit on the actual advance of only £95; and besides that, he has the £5 in his hands to trade with immediately, instead of waiting till the end of the year. In the large amounts of money which banks deal with, this makes a very sensible difference in their profits, especially when the rate of discount is high.

On RATE OF INTEREST *and* RATE OF PROFIT.

25. We have now to call attention to the definition of an expression which has been the cause of immense confusion in Economics. Every one knows what *Rate of Interest* means. When people speak of interest at 5 per cent., they always mean that £5 is given for the use of £100 for some given time—as a year. It is perfectly clear that we can have no conception of what rate interest is, unless we are told in what time it accrues.

By a most extraordinary oversight, however, this has been quite overlooked in the definition of *Rate of Profit*. It will

scarcely be believed, that no Economist has seen that *Time* is a necessary element in the definition of rate of profit. Thus M'Culloch says, "The *rate* of profit is the proportion which the amount of profit derived from an undertaking bears to the capital employed in it." The whole of Ricardo's doctrines of wages and profits are full of fallacy arising from this obvious omission. So Malthus defines rate of profit to be the per-centage proportion which the value of the profits upon any capital bears to the value of such capital. Even Mr. Mill has not seen the defect in the definition. He says, B. ii., *c.* xv., "The cost of labour then, is, in the language of mathematics, a function of three variables; the efficiency of labour; the wages of labour (meaning thereby the real reward of the labourer); and the greater or less cost at which the articles composing that real reward can be produced or furnished. It is plain that the cost of labour to the capitalist must be influenced by each of these three circumstances, and cannot be affected by any other. These, therefore, are also the circumstances which determine the rate of profit; and it cannot be affected except through one or other of them." What? is not the *rate* of profit affected by the *time* in which it is made? Suppose a given amount of profit to be made on a given amount of capital, is it the same *rate* of profit whether it be made in a year or a day? According to the definition in general use among Economists, a profit of £10 made upon £100, is exactly at the same *rate* if it be made in a year, a month, a week, or a day! Nay, according to Mr. Mill, the rate of profit *cannot* be affected by the time in which it is made!

This definition is so manifestly erroneous that it is only necessary to call attention to it to be at once admitted. It is quite clear that time is a *necessary* element in the definition of *rate of profit.* In fact it is simply unintelligible without it. If we were told that a trader had made a profit of £10 on £100, it would be as impossible to conjecture what the rate of profit had been, as it would be to determine a horse's rate of speed if we were only told that it had galloped 20 miles.

It often happens that the rate of profit is the greatest when the actual profit is the least. If a trader were to make 50 per cent. profit on one transaction, that would be a high profit; but if he only made one transaction in the year, he would not increase fast in opulence. His rate of profit would be 50 per cent. But

suppose that he only makes a profit of 5 per cent. on a transaction, but makes that profit in one day, then the rate of that profit is upwards of 1,500 per cent. per annum, and if he could make a transaction at that profit each day, his actual profits would be upward of 1,500 per cent. Hence the rate of profit would be high, while the actual profit is low. And if the trader reinvested the profits as they occurred, as capital, his rate of profit on his original capital would increase at compound interest, and be enormously greater.

Bacon saw clearly what has been far too much overlooked by Economical writers, that the frequency of returns is of far more consequence than the magnitude of each case of profit. He says, "The proverb is true that light gains make heavy purses, for light gains come thick, whereas great come but now and then." and this is entirely in accordance with what modern experience demonstrates as the true axiom of trade—*small profits and quick returns.*

The rectification of this error in the definition of rate of profit, which must be admitted as soon as stated, clears up a vast deal of obscurity which involved the subject of profit. Thus, when profits are said to be reduced to 10 per cent. it seems somewhat paradoxical to say that interest can be paid at 15 per cent. It is, nevertheless, true, and constantly happens; the apparent paradox only arises from the difference of estimating rate of interest and rate of profit in common language. When traders pay interest, it is always calculated at the rate *per annum*, but it is too common to measure profits by the actual transaction, without reference to the time. Thus, if a trader pays interest at the rate of 15 per cent. per annum, he makes profits, perhaps, at the rate of 10 per cent. per week, or per day, which is at the rate of 520 or 3,130 per cent. per annum, allowing for the number of working days in the year. This at once dissipates the apparent paradox, and explains how trade can be carried on at rates of interest which would seem incredible. In ordinary times in London, the second class bill-brokers charge their customers one shilling in the pound on three months' bills, which is, in reality, discount at the rate of 20 per cent., or interest at the rate of 25 per cent. per annum. In ancient times, and in the middle ages, and in America at the present day, the rate of interest is even higher than that.

These rates are, however, as nothing compared to the rates paid by petty provision dealers, and may serve to shew the utter absurdity of the Usury Laws which were so long in force in England, and are so still in France, though they will probably be abolished there very shortly. Gerard Malynes, a writer in the days of Charles I., observed that the petty provision trade of London was carried on with money borrowed at the rate of 400 per cent. per annum. In the days of Turgot penalties of the most terrible severity were enacted against the infringers of the Usury Laws. To show their absurdity, Turgot instances the advances which money lenders at Paris made to the petty dealers, who bought victuals in the market, to retail them in different parts of the capital. The charge was 2 sous a week for the loan of a crown of 3 francs, which was equal to interest at the rate of 173 per cent. per annum. The whole of the small provision trade of Paris was carried on by means of these loans. "Nevertheless," says Turgot, "the borrowers do not complain of the terms of this loan, without which they could not carry on the trade by which they live. And the lenders do not get very rich, because the exorbitant interest is only the compensation for the risk their capital runs. In fact, the insolvency of a single borrower sweeps away all the profit which the lender can make out of thirty of them."

The idea that trade could flourish upon money borrowed at 173 per cent. seems somewhat startling until we analyse the operation. No doubt the borrower paid two sous a week for the loan of a crown, but then the probability is that what he paid a crown for in the morning he sold again the same afternoon for three francs and a half, or more. Now if he repeated this operation once every day, it is clear that he would have gained at the end of the year 3,130 sous, omitting Sundays. That is, with a capital at no time exceeding 60 sous he would gain a profit of 3,130 sous in the year, which would be at the rate of 5,216 per cent. per annum, and out of this he would only pay 173 sous for the loan of the money.

M. Gustave de Puynode, quoting from the speech of a Member of the last Legislative Assembly of France, gives an instance which is even more startling than the last. He said, "Every morning the small provision dealers received a 5-franc piece to buy the objects, which they re-sold with a profit of 3 or 4

francs. In the evening they repay the 5-franc piece, and give 25 centimes in addition. They make no complaint of interest, which is yet at the rate of 1,800 per cent." Nor had they any reason to do so, for by borrowing this 5-franc piece they made 3 francs of profit, out of which they only paid ¼ for interest. If, therefore, the rate of interest was 1,800 per cent. per annum, the rate of profit, assuming the gain to be, as stated, 3 francs per day, was at the rate of 21,600 per cent. per annum. And the interest, which is only one-twelfth part of the profit, is not unreasonable. And yet by the law of France it is still a crime to take more than 6 per cent.!

On Securities for Money *and* Convertible Securities.

26. The expressions *Securities for Money* and *Convertible Securities* frequently occur in Economics, and we must now explain them.

A *Security for Money* always means an obligation, or security for the payment of a definite sum of money from a definite person at a definite time. There is, therefore, always some obligor, or some person who is bound to pay it. There are different forms of such securities, such as Bank Notes, Promissory Notes, Bills of Exchange, Exchequer Bills, Navy Bills, and debts of all sorts.

Convertible Securities are securities which no particular person is bound to pay, but for which, under usual circumstances a purchaser can readily be found in the open market. Thus, any property which can be readily sold is called a convertible security. This species of Property includes the Public Funds, Shares in all sorts of commercial companies, and all title deeds to property of a moveable description of which the property passes by simple delivery, such as dock warrants and bills of lading. The fundamental distinction between these latter and instruments of credit will be clearly explained in a future chapter. Now as convertible securities mean property which is readily convertible into money, of course there are all degrees of convertibility. There is no absolute distinction in principle between the different species of property. But of all species of property the Funds are the most readily convertible: and the

land, or real property, the least readily convertible, mainly in consequence of the difficulty in its transfer.

Thus securities for money *never* represent any specific money, but are always a claim on the person. Convertible securities are never a claim on a person, and certain kinds of them are *always* a title to certain specific goods. Sometimes a security for money may be changed into a convertible security. This is done in what is technically called *funding the unfunded debt.* The Government often raises money on its bills like an individual, and is of course bound to pay them at maturity. These Exchequer Bills, therefore, as they are called, are like any other bills of exchange, securities for money. Sometimes when these bills amount to a large sum, it is very inconvenient for the Exchequer to pay them in full, and it gets its creditors to agree not to demand repayment of the whole debt, but to receive only the interest on it in perpetuity. When this is done the creditor loses the right to demand the principal sum from the Government, but he may sell the right to receive the annuity to any one else in the open market. It then becomes a convertible security, and is called the Public Funds, or Stock. This operation is termed *funding the unfunded debt.* In a similar manner Railway companies have been allowed to borrow money on their bonds, termed Debentures; but finding it inconvenient to be obliged to repay these large sums have formed them into Debenture Stock, upon which they are only bound to pay the interest, like the Public Funds.

On the Definition of CAPITAL.

27. The word Capital is one of the great fundamental conceptions of Economics, and we must frame a definition of it in accordance with the canons we have already laid down.

Any Economic Quantity whatever may be employed in two different ways. The proprietor may either use it himself for his own personal enjoyment, or he may use it to produce a profit. When an Economic Quantity is thus used *productively*, i.e. so as to produce a profit, it is termed CAPITAL. Senior says very justly—"Economists are agreed that *whatever* gives a profit is

[1] *Political Economy, p.* 67.

properly termed CAPITAL." And Stephens in his Thesaurus defines the word thus:—

"Κεφάλαιον. Caput unde fructus et reditus manat. Capital, the source whence any profit or rent flows."

It is clearly to be understood that there is no such thing as absolute Capital. Whether any Economic Quantity is to be termed Capital or not depends not upon the *nature* of the thing itself, but exclusively on the *Method* in which it is employed. We have already seen that Economic Quantities are of three distinct orders, and as any of these may be used so as to produce a profit, it follows that Capital may be of three distinct kinds. Thus if I have a sum of money which I spend in purchasing things for my own use and enjoyment, it is not Capital; but if I use it so as to produce a profit in any way, it then becomes Capital. Thus if I lend it out at interest; or buy goods with it to sell again with a profit; or invest it in a commercial enterprise of any sort; or in the funds: or if I spend it in acquiring the knowledge necessary to exercise a profession such money is capital. And the things or commodities purchased for the purpose of producing the profit, are termed Capital as well: because though the money was originally employed in acquiring them, they are again employed in purchasing money, and there is no profit unless they sell for a greater sum than was spent in purchasing them.

So any material thing may be capital. The land belonging to a landlord is Capital to him if it produces him a profit. Several great noblemen possess immense tracts upon which great part of London is built, which yield them an enormous revenue: that land is Capital to them.

So many natural advantages may be Capital. If a person has a natural waterfall in his grounds and he makes no use of it, but considers it as a mere ornament, it is not Capital; but if he uses it to turn a mill then it becomes Capital. So if he has a spring of mineral water which acquires a reputation for curing diseases, and so causes visitors to flock to the place, and live there for the benefit of the waters, thereby giving great value to the land and producing him a good revenue, it is Capital to him.

It is sometimes said that air, sunshine, etc., are not wealth, because they cannot be appropriated; but in many cases the climate is *bonâ fide* Capital to a country. The climate, it is

true, cannot be exchanged away, but it may attract strangers to come and settle there for the benefit of their health, who would not have done so otherwise, and so brings wealth to the place. The climate is real Capital to Madeira, the Riviera, and many other places.

So if I have musical or histrionic talents, and use them merely for the amusement of myself and my friends, these talents so used are not Capital; but if I adopt the stage as a profession, or earn an income by giving lessons in music, or drawing, then these talents become Capital. So with all the professions, clerical, legal, medical, military and naval, engineering, civil service, etc. So if I dig in my garden for my own amusement, my labour is not Capital, but if I dig, or plough, or do any other work for hire, then my labour becomes Capital; and indeed to the great majority of the labouring classes, their labour is their only Capital.

So trade secrets, so long as they can be kept secret, and persons can use them for the purpose of profit, are a very valuable kind of Capital.

So Economic Quantities of the third order may be Capital also. If an author writes a successful work, the copyright of it is Capital to him; or if he sells it to a publisher, it is Capital to the publisher. If a man buys into the Funds, they become Capital to him. There is a class of traders whose business it is to buy and sell the Funds, or Shares in Commercial Companies. They are called Stock jobbers, and they keep a stock of this property on hand, just as other traders keep a stock of material goods. The business of a banker is to buy commercial debts. He buys them from his customers before they are due for a lower price than their amount, and sells them when they are due to the debtors at their amount. These debts are to a banker, exactly the same as a stock of goods to a shopkeeper. They are Capital to him; and as he invariably purchases them with his own credit, his credit is Capital to him.

One of the most important branches of this species of Capital is when traders use their Moral Capital as purchasing power. They buy goods with their promise to pay instead of actual money; and these promises to pay, or Rights to demand payment, circulate in commerce and perform the functions of money, and are themselves the objects of a gigantic commerce.

28. Now, there are two fundamentally distinct ways in which Capital may increase:—

1. By a direct and actual increase of quantity; Thus flocks, and herds, cattle, corn, and all fruits of the earth increase by adding to their numbers or quantity.

2. By Exchange: that is by exchanging something that has a low value in a place, for something which has a higher value.

Now it is clear that money produces a profit, and, therefore, becomes capital, by the second of these methods. We do not sow sovereigns in the ground like corn, nor do they produce a crop of half-sovereigns. But money becomes capital by exchanging it for some goods, and which may be sold or exchanged again for a greater sum than they cost. And it is also clear that any Economic Quantity whatever which is used as a substitute for money to purchase goods and for the purpose of profit is capital as well as money, by the force of the very definition which Senior says all Economists are agreed upon.

Smith says[1]—"A capital may be employed in four different ways: either, first, in procuring the rude produce annually required for the use and consumption of the society; or, secondly, in manufacturing and preparing that rude produce for immediate use and consumption; or, thirdly, in transporting either the rude or manufactured produce from the places where they abound to those where they are wanted; or, lastly, in dividing particular portions of either into such small parcels as suit the occasional demands of those who want them." Now it is clear that the last two ways are identical in principle, and include the business of the foreign merchant, the wholesale and the retail dealer—that is the whole operations of commerce or exchange. Hence we may say that Smith enumerates three distinct methods of employing a capital productively—agriculture, manufactures, and commerce, to which we must add, as Smith himself admits afterwards, money spent in acquiring the knowledge and skill necessary to exercise a profession. Now, without inquiring yet what the technical Economic definition of *Production* is, which is done a little further on, we see at once that Smith enumerates *exchange*, or *purchase*, as one species of production. Now Mr. Mill says[2]—"anything which is susceptible of being ex-

[1] *Wealth of Nations, B. II., c. 5.*

[2] *Principles of Political Economy, B. I., c. 4, § 4.*

changed for other things, is capable of contributing to production in the same degree" as money, and also[1]—"bank notes, bills of exchange and cheques circulate as money, and perform *all* the functions of it."

Now money becomes productive capital by being employed to purchase things to be sold again at a profit. And if a man can purchase things by means of his credit, that is, if he can purchase them by giving his promise to pay at a future time, and by so doing sells the goods at a higher price, and so has a profit after paying and discharging his debt, it is quite clear that his credit has been capital to him in exactly the same way that money would have been.

Let us take a very simple example. Suppose a tailor wants to make clothes for a customer. He pays, say £10 in cash to the cloth merchant, and after making up the cloth he sells them perhaps for £15. Then he has used his money as capital. He has £10 at the beginning of the operation, and £15 at the end of it; or he has made a profit of £5.

Suppose the tailor has no money to buy the cloth with, then if he cannot buy it on credit, he cannot make the clothes, and he cannot have any profit.

Suppose, however, the cloth merchant, believing in his honesty and capacity to pay, sells him the cloth in exchange for his promise to pay money three months after the time. As the payment is deferred, and as of course there is some risk of loss, he will, by way of insurance, charge the tailor a somewhat higher price than the cash price. Suppose he sells his cloth in exchange for the tailor's promise, to pay £11 three months after the time. Now this is as much a sale as if the price had been paid in money. The property in the cloth is gone to the tailor, and what the cloth merchant has received in exchange for it is, the Right, or Property, to demand £11 three months after date. And this Property is called a Credit or a Debt.

The tailor having purchased the cloth by creating a debt against himself of £11, payable in three months' time, makes up the clothes as before, and is paid £15 by his customer. At the end of the three months he pays £11 out of this to the cloth merchant, and has, of course, remaining for himself a profit of £4.

[1] *Principles of Political Economy, B. III., c.* 12, § 1.

Now, by the cash operation, he is better off at the end by £5: and by the credit operation he is better off by £4, than he was at the beginning. It is true he has not made so great a profit by credit as by cash. But still he has made a profit by his credit, which he could not have made without it. Hence, by the very definition, his credit has been capital to him, and has produced exactly the same circulation of commodities, and employed the same quantity of labour that cash would have done. Hence, we see that credit is productive capital in exactly the same way, and in the same sense, that money is.

This very simple example must suffice here to illustrate the doctrine that credit is capital, which has been strenuously denied in recent years. The credit system will demand a very full examination and exposition in a future chapter, as by means of it almost all modern commerce is carried on. The general belief and confidence that a man creates of his trustworthiness may be called Moral Capital. But this is not subject to the science of Economics until he brings it into commerce, and effects purchases by means of his Promise to pay. When this done this becomes an actual definite Right or Property, and is Incorporeal Property, which may be bought and sold like any Material Property.

The General Definition of Capital then is:—CAPITAL *is any Economic Quantity used for the purpose of Profit.*

Having then obtained this general conception of Capital, which is clear, simple, and comprehensive, and satisfies the canons we have laid down, we should have proceeded with the exposition of the subject, only unfortunately considerable confusion and error has been caused by employing definitions of Capital which are too limited, and confined by unphilosophical restrictions, and we must give a little time to clear away this confusion.

29. The word Capital comes to us from the Greek κεφάλαιον, a capital, or principal sum, placed out at interest.

Thus Plato; de Leg., v. 742:—Μὴ ἀποδιδόναι τῷ δανεισαμένῳ μήτε τόκον μήτε κεφάλαιον.

Not to return to the lender either the interest or the capital.

Acts xxii., 28:—Ἐγὼ πολλοῦ κεφαλαίου τὴν πολιτείαν ταύτην ἐκτησάμην.

I bought this freedom for a great sum.

Suidas says :—Κεφάλαια, τὰ χρήματα—Capital, money.

We have not found any passage in which the word κεφάλαιον in Greek is used metaphorically for a source or *fountain* in general. But in Latin the word CAPUT is constantly used not only as a sum of money put out to interest, but as the source or fountain whence things spring.

Thus in Livy, vi. 15. De capite deducite quod usuris pernumeratur.

Take away from the Capital what is counted as Interest.

Also, vi., 36—Promulgavere legem de ære alieno, ut deducto eo de capite, quod usuris pernumeratus esset.

They published a law of debt that all that was reckoned as interest should be deducted from the capital.

So Horace, *Sat.*, I., 2., 14—Quinas hic capiti mercedes exsecat.

He squeezes out five times the usual rate of interest for his capital.

In these passages, *caput* is used strictly as a sum of money put out at interest. But it is also frequently used as the source or fountain of anything. Columella uses it for capital in general; xi. 1, 28—Ut et jacturam capitis amissi restituat.

So as to restore the waste of lost capital.

In classical Latin we do not find that the word *capitale* was used in this sense, but it was in mediæval Latin. Thus we read in Ducange—

CAPITALE.—Debitæ pecuniæ caput. Papias, capitale, caput pecuniæ: and it is said to be equivalent to *sortes*, a usual Latin word for the capital of a sum lent: and he quotes several instances in which the word is used by mediæval writers in this sense.

In process of time this word was shortened into *captale*, which was particularly applied to flocks and herds, because that was the principal wealth. Hence by corruption, come our words *cattle*, applied to animals, and *chattels* applied to things.

So the word Capital in Italian and French was applied to the sum of money invested in business, or put out at a profit. Now a sum of money put out to interest is only a special application of a general idea; and if we want to generalize it we may say that it is any Economic Quantity used for the purpose of profit; or the source whence a profit springs.

When the word Capital was first used by the Economists,

they first applied it to a sum of money put out at interest; afterwards, Turgot gave it a more extended meaning[1]—"Whoever, either by the income of his land, or by the wages of his labour, or his industry, earns every year more values than he spends, can place in reserve this superfluity and accumulate it: these accumulated values are what we call a CAPITAL." He then shews how this capital in money may be invested in anything, such as an estate in land,[2]—"it is absolutely indifferent whether this sum of values, or this capital, consists in a mass of metal, or in anything else, because money represents every species of value, as every species of value represents money." Thus Turgot introduced the notion of capital being the fruit of the accumulation of past labour: primarily money, and then any other things, such as farms, or merchandize[3]—"We have seen that money counts for almost nothing in the sum total of existing capitals, but it counts for a great deal in the formation of capitals. In fact, almost all savings are made in money; it is in money that incomes are paid to proprietors, that advances and profits return to undertakers of all sorts: it is, therefore, money that they save, and the annual increase of capitals is made in money. But the undertakers make no use of it but to change it immediately for other sorts of things, in which their enterprises turn: so this money returns into circulation; and the greatest part of capital only exists in things of different kinds."

Thus Capital was extended to mean anything which gave a profit, but it was held to be the result of anterior labour. Adam Smith says[4]—"When the stock which a man possesses is no more than sufficient to maintain him for a few days, or a few weeks, he seldom thinks of clearing any revenue from it. He consumes it as sparingly as he can, and endeavours by his labour to acquire something, which may supply its place before it be consumed altogether. His revenue is in this case derived from his labour only. This is the state of the labouring poor in all countries.

"But when he possesses stock sufficient to maintain him for months or years, he naturally endeavours to derive a revenue from the greater part of it, reserving only so much for his immediate consumption as may maintain him till the revenue begins

[1] *Sur la formation et la distribution des Richesses*, § 59.
[2] *Ibid.*, § 59. [3] *Ibid.*, § 100.
[4] *Wealth of Nations*, B. ii., c. 1.

to come in. His whole stock, therefore, is divided into two parts. That part which he expects to afford him this revenue is called his *Capital*. The other is that which supplies his immediate consumption, and which consists either, first, in that portion of his whole stock which was originally reserved for this purpose; or, secondly, in his revenue, from whatever source derived, as it gradually comes in; or, thirdly, in such things as had been purchased by either of these in former years, and which are yet not entirely consumed, such as a stock of clothes, household furniture, and the like."

Thus Smith shews that he considers Capital to be an Economic Quantity employed in a particular way, and his description certainly implies the necessity of anterior accumulation.

Smith, however, could not help perceiving that a trader may derive profits from something else besides his stock. He says [1] —"Trade can be extended as stock increases, and the CREDIT of a frugal and thriving man increases much faster than his stock. His trade is extended in proportion to the *amount of both*, and the sum or amount of his profits is in proportion to the extent of his trade; and his annual accumulation in proportion to the amount of his profits." Thus Smith sees here that Credit is a source of profit just in the same way that stock is, and as we shall see very shortly, Smith enumerates paper currency of all kinds under the head of floating Capital. He also enumerates the intellectual qualities and talents of the people as capital because they make a profit by them.

So J. B. Say, after enumerating in several places the various things of which capital consists, includes in it the various sciences and professions, and in fine, *everything* which is employed in a productive operation—"That is why from the moment in which this value resides in objects employed in a productive operation, I call it a *Capital*, whatever be the objects in which it resides." [2]

The qualification "the result of past labour" has been added by nearly all English writers to the definition of Capital. Ricardo says [3]—"Even in that early state to which Adam Smith refers, some *capital*, though possibly made and accumulated by the hunter himself, would be necessary to enable him to kill his

[1] *Wealth of Nations, B. I., c.* 10.
[2] *Cours, Part I., c.* 8.
[3] *Principles of Political Economy and Taxation, p.* 16.

game"; but we find no explanation of this word Capital till p. 89—"Capital is that part of the Wealth of a country which is employed in production, and consists of food, clothing, tools, raw materials, machinery, &c., necessary to give effect to labour." But Ricardo has not told us what he means by Wealth or Production, so that we are really left in the dark on the subject.

Senior says[1]—"The term Capital has been so variously employed that it may be doubted whether it has any received meaning. We think, however, in popular acceptation, and in that of Economists themselves when they are not reminded of their definitions, that word signifies *an article of wealth, the result of human exertion, employed in the production or distribution of wealth.* We say the result of human exertion in order to exclude those productive instruments to which we have given the name of natural agents, and which afford not profit, in the scientific sense of that word, but rent."

This definition of Capital, however, does not agree with what Senior said elsewhere, which we have already quoted, that Economists are agreed that *whatever* gives a profit is properly termed Capital.

Mr. J. S. Mill says[2]—"It has been seen in the preceding chapters that besides the primary and universal requisites of production, labour and natural agents, there is another requisite without which no productive operations beyond the rude and scanty beginnings of primitive industry are possible: namely, a stock previously accumulated of the products of former labour. *This accumulated stock of the produce of labour is termed Capital.* The function of Capital in production, it is of the utmost importance thoroughly to understand, since a number of the erroneous notions with which our subject is infested originate in an imperfect and confused apprehension of this point.

"Capital, by persons wholly unused to reflect on the subject, is supposed to be synonymous with money. To expose this misapprehension would be to repeat what has been said in the introductory chapter. Money is no more synonymous with

[1] *Political Economy, p.* 59.
[2] *Principles of Political Economy, B I., c.* 4.

capital than it is with wealth. Money cannot in itself perform any part of the office of capital since it can afford no assistance to production (?) To do this it must be exchanged for other things, *and anything which is susceptible of being exchanged for other things is capable of contributing to production in the same degree.* What Capital does for production is to afford the shelter, protection, tools and materials which the work requires, and to feed and otherwise maintain the labourers during the process. These are the services which present labour requires from past, and from the produce of past, labour. Whatever things are destined for this use—destined to supply productive labour with these various prerequisites—are Capital. * * *

"The distinction, then, between Capital and not Capital, does not lie in the kind of commodities, but in the mind of the capitalist—in his will to employ them for one purpose rather than for another; and all property, however ill adapted in itself for the use of labourers, is a part of capital as soon as it, or the value to be received from it, is set apart for productive employment."

Thus Mr. Mill fully agrees in the distinction that capital is not any particular thing, but that whether any article is capital or not, entirely depends on the *method* in which it is employed; and he also says that *any* thing which can be exchanged, and *all* property set apart for production, may be capital—admissions we shall find hereafter to be of the most important consequence.

We need not quote any more writers, as they say nothing different, but we may gather that, with few exceptions, they acknowledge that nothing is absolutely capital, but that whether it is so or not, depends upon the method of its use, or employment.

This would be perfectly satisfactory as a general definition, but it will be seen, they all clog the definition with the limitation that it is the fruit of past labour. Thus we think the spirit of these definitions may be expressed thus:—

Capital is wealth accumulated from past labour, and employed in a particular way.

Now this definition violates the first canon we laid down regarding the formation of conceptions, it is not general, it is limited, for it is not wealth in general, but wealth the fruit of past human labour.

The question is to consider whether this limitation is necessary and essential, or whether it is accidental and may be rejected.

Now we observe that though it is true that a great portion of existing capital may be the result of human labour, it is perfectly manifest that the first capital men possessed, was NOT the result of human labour.

When man was first placed upon the earth, it is undoubtedly certain that he found the means of support already prepared for him. This is a conclusion that all must agree in. The most ardent sticklers for the literal interpretation of the first chapter of Genesis, and the most sceptical of geologists, are unanimously of opinion, that, however, or whenever, man appeared on the earth, he found fruits and corn, and cattle, and fish, *already* on the earth prepared for his use. No one can allege that the first cattle, the first fruits, or the first corn were the result of human labour.

Mankind, therefore, employing part of these for immediate use, and setting aside and reserving another portion for increase, for reproduction, for producing something for future use, immediately turned them into CAPITAL, which was not the result of human labour.

Moreover, though flocks and herds may be appropriated and tended, and may be kept for the purpose of increase, it seems to us to be a most violent abuse of language to say that cattle, a species of capital,—in fact, a corruption of the word—are the fruits of accumulated human labour.

We may say the same of fruit-bearing trees; they are capital, but cannot properly, as we think, be called the fruits of human labour. The same is true of corn, though there is more human labour employed about that: it seems to us to be an incorrect use of language to call corn the result of human labour. Man indeed may plant and water, but is it man who makes the corn grow? Paul may plant and Apollos may water, but it is God that giveth the increase.

Now no doubt it is undeniably true that a great quantity of capital is the result of accumulated human labour: but as we have shewn that all original capital, and a great portion of existing capital, is not the result of human labour, it manifestly follows that the limitation "the accumulation of past human labour," is not the *essence*, but the *accident* of capital, and must be rejected

from the general definition. It is a very strong instance of the great general law in Inductive Logic, that in framing conceptions and axioms the *negative* instance is the stronger of the two.

In fact it is quite clear that to insert the qualification, "the produce of past human labour," is to give a *description* of how it was got: and many authors content themselves with telling us what things they consider to be Capital. Now, we do not want a *description* of how capital is got, nor an *enumeration* of what things are Capital, but we want a CONCEPTION, or DEFINITION, of what Capital is.

We conclude, therefore, that the definition of Capital must be disembarrassed of the condition with which it is clogged, it is the intrusive idea which must be eliminated, and we have as the general conception of Capital, that it is any Economic Quantity used for the purpose of profit.

We shall find that it is of the greatest importance to the right comprehension of the whole of Economics to have this clearly understood, and we shall see that a great deal of confusion and misapprehension has been caused in the science by this erroneous limitation. Mr. J. S. Mill says that *anything* which may be exchanged may be capital in the same way that money is, and in several places he says that bank notes may be capital; and how are bank notes, or credit, of which they are one form, the accumulation of past human labour? There are abundance of things which may be exchanged, and which give a profit which are in no way the result of past human labour.

Examination of Mr. Mill's four fundamental propositions respecting Capital.

30. Having thus obtained a general conception of Capital, we should have proceeded with the exposition of the subject, but Mr. Mill has laid down[1] what he calls four fundamental propositions respecting Capital, which we must examine.

These four fundamental propositions are:—

1. That industry is limited by Capital.
2. That all Capital is the result of saving.
3. That although saved, and the result of saving, all Capital is nevertheless consumed, *i. e.*, destroyed.

[1] *Principles of Political Economy, B. I., c. 5.*

4. That what supports and employs Productive Labour is the Capital expended in setting it to work, and not the demand of purchasers for the produce of the labour when completed. Demand for commodities is not demand for labour.

Mr. Mill's first proposition that industry is limited by Capital is taken from Smith, who says [1]—"The general industry of the society never can exceed what the capital of the society can employ. As the number of workmen that can be kept in employment by any particular person must bear a certain proportion to his Capital, so the number of those that can be continually employed by all the members of a great society must bear a certain proportion to the whole Capital of that society, and never can exceed that proportion. No regulation of commerce can increase the quantity of industry in any society beyond what its capital can maintain." To this we may observe that Smith expressly says, as we have seen, that trade can be extended in proportion to the stock *and the credit* of the trader, and he classes paper currency under Capital. Now in modern times nineteen-twentieths, or probably it would be far nearer the truth to say that ninety-nine hundredths of industry is carried on by credit. Unless Credit be admitted to be Capital this proposition is entirely false.

With respect to the second proposition, that all Capital is the result of saving, it has been already disproved. It is only *some* Capital that is the result of saving. Besides many other things that might be named, the infinitely greater proportion of modern commerce is carried on by means of Credit, which we shall abundantly shew every Economist, including Mr. Mill, declares to be Capital. Now how is Credit the result of saving? This proposition is, therefore, not only not fundamental, but absolutely erroneous.

The third proposition that although saved, and the result of saving, all Capital is nevertheless consumed (*i. e.*, destroyed), is if possible even far more erroneous.

The Duke of Bedford and the Marquis of Westminster are the proprietors of vast districts of ground on which London is built. This ground yields them enormous revenues; it is therefore capital to them. How is it consumed?

[1] *Wealth of Nations, B. IV., c. 2.*

The great Joint Stock Banks of England and Scotland trade by means of their credit; every writer in the world who knew what he was writing about, has fully understood and said that the Credit of a Bank is capital to it, because it makes all its purchases and all its profits by means of its Credit. How is its credit consumed?

A great author writes a work. The copyright of it is capital to him, the result of labour; or he sells the copyright of it to a publisher, and it becomes the publisher's capital. It may no doubt be destroyed by an act of the Legislature; but how is it consumed?

A person by his skill discovers some valuable trade secret which brings him in great profits. This trade secret is partnership assets and capital. How is it consumed?

A professional man or a trader buys the practice or the goodwill of a business; this is capital to him: how is it consumed?

The street crossings in London are valuable property, or estates, just like land. They are bought and sold; they are bequeathed; they form the subject of marriage portions; just like other estates in land. How are they the result of saving; how are they consumed?

The proprietor of land discovers a mineral spring on his land. This spring is found to be beneficial in many diseases. People crowd to it, a great demand for houses springs up, and the land produces a large revenue to its owner. It is therefore capital. How is it the result of saving? The spring flows on for ever; how is it consumed?

A Dock, a Canal, or a Railway Company collect subscriptions from their Shareholders; this is their capital: they then expend that capital in excavating the dock, or the canal, or in forming the railway. The dock, the canal, and the railway then become their capital, and no doubt require a certain sum to be expended in maintaining them in repair. But how are they consumed?

We might give several more instances, if necessary, to shew that it is wholly erroneous to say that it is a fundamental proposition respecting capital that all capital is consumed. But the above are quite sufficient to show that it is only a partial truth.

Mr. Mill's fourth fundamental proposition respecting capital is stated thus[1]:—"We now pass to a fourth fundamental

[1] *Book I., ch. 5, § 9.*

theorem respecting Capital which is, perhaps, oftener overlooked or misconceived than even any of the foregoing. What supports and employs productive labour is the capital expended in setting it to work, and not the demand of purchasers for the produce of the labour when completed. Demand for commodities is not demand for labour." As the discussion which the consideration of this proposition gives rise to seems to us to belong more properly to the remuneration of labour, we shall defer it till the Chapter on Wages.

On Fixed and Floating Capital.

31. The true definition of Capital, then, is any Economic Quantity whatsoever used for the purpose of profit. But capital itself may be used in two different ways so as to produce a profit. It may either remain in the owner's possession,—and then it is usually called FIXED CAPITAL—or he may part with the possession of it, and it may be replaced to him with a profit; in this case it is called FLOATING or CIRCULATING CAPITAL.

Smith, B. ii., *c.* i., enumerates four species of fixed capital. 1st. Useful machines and instruments of trade; 2ndly. Buildings used in all sorts of trade; 3rdly. Improvements of land; 4thly. The acquired and useful abilities of the members of the Society.

He also enumerates four species of floating capital. 1st. The money by means of which the other three are circulated and distributed to their proper consumers; 2ndly. The stock of provisions in the hands of various dealers; 3rdly. The materials in the hands of different work-people to be made up; 4thly. The same materials when made up into finished products and ready for sale.

It is clear that this enumeration is very far from being complete, because there are many species of property omitted, which yet are capital. But under the term floating capital he enumerates money. And under the term money, he always includes paper money of all sorts and descriptions. Since Smith's day a distinction has arisen between "paper money" and "paper currency," but he always includes every species of paper under the term money, or the wheel of circulation, which he terms floating capital. Now this paper currency is simply CREDIT.

And hence we see that Smith expressly enumerates credit under the title of capital.

It is clear that if the return be made in one operation, it must include the whole sum necessary to replace the article, as well as the intended profits. But if the return be made by instalments at fixed periods, say a year, each instalment must consist of a sum partly to replace the deterioration of the article itself during that period, and partly to form the excess, or profit, of the capitalist, so at the end of the term, when the article is worn out, the sum of all these instalments should be sufficient to replace the original article together with the profits.

It is clearly to be understood, that it is according to the intention of the person who produces an article, and the purpose for which it is produced, that it receives either of these names, and not according to the nature of the article itself. The same article may receive different names, according as it passes to different owners, who produce it, or cause it to be produced for different purposes. The same article may be *floating capital* in the hands of one man, and *fixed capital* in the hands of its next possessor, if the first produces it for the purpose of selling it, and the second purchases it for the purpose of deriving an income from its use.

This distinction may also be stated thus. That if the whole price of the article is paid out of the current income of the country, it is *floating capital*; but if only the interest, or revenue derived from its use, then it is *fixed capital*. This distinction is often overlooked, and the term fixed capital is applied to articles of a certain nature, and floating capital to articles of another nature. Thus, houses and lands, machinery, railways, and ships are frequently termed fixed capital. But this is extremely erroneous. If a person employs his capital in building houses for the purpose of selling them immediately, they are floating capital in his hands, for their price is paid in one operation. But if another man buys them for the purpose of letting them out to tenants, and so only deriving a revenue from his capital, they become fixed capital in his hands. Many persons buy land on speculation, for the purpose of selling it again at a profit. The land in the hands of these jobbers is *floating capital*, but if another buys that land for the purpose of letting it out to farmers, or cultivating it himself, and so only making a revenue

of it, it becomes *fixed capital* to him. So with machinery; to the machine maker, who makes it for the purpose of selling it to the manufacturer, it is floating capital. In the hands of the manufacturer, who buys it for the purpose of increasing the quantity of his productions by its use, and so only making a profit of it, it becomes *fixed capital.* Hence, we may state generally, that all articles, whatever be their nature, while they are in the hands of a person who deals in them, that is who produces or buys them for the purpose of selling them again, as soon as he can, are *floating capital.* As soon as they pass into the hands of a person who only makes a profit by interest derivable from their use, they are *fixed capital.*

The articles we have just mentioned are, it is true, generally produced with the intention of their ultimately becoming fixed capital, but we have shown that they may, or they may not, be fixed capital, when they are produced, according to different circumstances; and, unless we know what those circumstances are, it is impossible to decide which name is to be given to them. It may also be easily shown how articles which are usually classed as floating capital may become fixed capital. Furniture and clothes would usually be termed floating capital, because they are generally made for the purpose of being sold. But if a person made them for the purpose of only letting them out for hire, they would become fixed capital in his hands. An ordinary tailor usually makes clothes to be sold to his customers, so they are floating capital to him. But in the hands of Nathan, who lets out uniforms and dresses for particular occasions, they become fixed capital, just as much as a house or a mill. So, if a cabinet-maker makes furniture, for the purpose of letting it out for hire, that furniture is as much *fixed capital* as any railway.

We thus see how improper it is to apply the term either of floating or fixed capital to any object, whatever be its nature, unless we know the intention of its owner in using it. And unless an article is incapable of being applied to more than one of these purposes, it is not correct to call it by either name. There are very few articles to which the name of fixed capital may be invariably applied, the only one to which it is necessarily applied is the knowledge, skill, and capacity of an individual. Those to which it may be applied with the least risk of error are Railways, Canals, Docks, and agricultural improvements. The

instances are very rare in which such things as Railways, &c., are made for the purpose of being sold. If that did happen, they would have to be called floating capital, in the hands of such a person or company. So that we may safely say that there are no articles which are necessarily fixed capital. Nor are there any which are necessarily floating capital. The mode of expending capital, which is almost invariably floating capital, is the wages of labour. In all ordinary cases in this country, the wages of labour are floating capital. But in slave countries the case is different. There the slaves are fixed capital. The same thing occurs in this country, where people sometimes enter, as it were, into a species of modified servitude. Sometimes people hire themselves out to others for a certain period, who are allowed to let them out for particular occasions, and receive the money for their performances. Thus, it is not unusual for the most eminent singers and musicians to agree to serve the large music-sellers for a definite period, during which their employer has the right to let them out on occasions, just like instruments or plate.

To the capitalist who lives merely on the profits of his capital, it may make very little difference whether he reaps that profit in one operation or in many, as the result must always be the same to him in the end. But to the class of persons who live by their daily labour—the workmen in his business—the difference in the mode of employing capital is of vital importance. Thus, if the builder of a ship means to sell it immediately, and be paid the whole price of it at once, he will employ that money in building another ship, and the full amount of the price of the ship, deducting the part which goes to support himself, will be expended in the wages of the shipwrights, and on the producers of the materials for the new ship. In this case it is floating capital. But if the builder of the ship means only to let it out for hire, and receive a periodical instalment for its use, he can only employ the part of that instalment which represents its deterioration in building a new ship; consequently, if he changes the nature of his business very suddenly, that is, if he suddenly turns his floating into fixed capital, the fund applicable to the promotion of labour will be greatly diminished, and it must infallibly cause great distress among the persons who were dependent on him for their support. By seeking other employments they

may, perhaps, ultimately be as well off as before; but it is quite clear that if a large number of persons have been accustomed to have a particular kind of labour found for them, any sudden change by which the system is disorganized, must produce at least temporary distress. It might be said that the capital of the purchaser of the ship, instead of going to the builder of the ship, and being spent among that class of workmen, might be employed in encouraging other species of industry, so that the result to the whole community would be the same. But the overthrow of any system upon which a great number of people depend, must be followed by much suffering. It appears then, that the conversion of floating into fixed capital, requires to be done with great caution, and only in certain quantities, to avoid its being injurious to the interests of large classes of persons. And if a large class of the public are seized with a sudden mania to convert an unusual quantity of their floating into fixed capital, it must inevitably be followed by at least temporary distress.

32. We have observed that, if the owner of an article disposes of its use for ever, or sells it, the price should be sufficient to replace the article, together with the profits. When he only lets it, the rent or hire is composed of one part for the deterioration of the article, and the other for the necessary profits. From this it follows, that the more permanent the article is, the lower will be the rent, or hire, compared to the price, because, assuming the profits to be the same, the deterioration is less during any given time. If it be of a perishable nature, the hire will be high compared to the price, because the deterioration will be great. A few cases will verify this remark. The rent of land is very low, compared with its price, usually not more than 3 or 4 per cent., because, among other reasons, the deterioration is very small. The rent of houses is much greater compared to their price, usually $7\frac{1}{2}$ or 8 per cent., because the deterioration is greater; the hire of furniture is considerably more, usually 15 or 20 per cent., because the deterioration is greater still, and so on, so that the hire must always be greater as the deterioration increases. From this it follows, that the hire of any article is by no means proportional to its value. Some important questions connected with these considerations will occur hereafter.

On PRODUCTION *and* CONSUMPTION.

33. The words *Production* and *Consumption* are two of the leading fundamental conceptions of Economics, and are always used as correlatives. It is said that Consumption is the end of all Production. But unfortunately the meaning of neither word is settled, so that it is impossible to affix any meaning to the proposition, and both words are often used in senses which are manifestly inadmissible

We have already seen that by Production, the Physiocrates meant the obtaining all sorts of produce from the earth, and bringing it into commerce. After passing through various stages which they called Distribution, it passed into the hands of the final purchaser, who bought it for use and enjoyment. This final purchase the Physiocrates called the *Acheteur-Consommateur*.

But as the Physiocrates maintained that all products are ultimately exchanged against products, the *Acheteur-Consommateur* of one product must have some product of his own to offer in exchange for it. The complete exchange of one product against another product they called Commerce, or Exchange.

They held[1] that money is of no use but to facilitate the exchange of products: being itself only an intermediate pledge between buying and selling. That commerce by the intervention of money is incomplete[2]: in an exchange, things are consumed (*consommés*) on each side; they are what people wish to enjoy. In a sale it is only the purchaser who fulfils his object, but all is not finished for the seller: the money he receives is not a *bien* capable of being enjoyed: he must in his turn become a buyer. An Exchange arrives directly at its object which is consumption (*consommation*); but a contract in which money intervenes is not consummated, or completed, or perfected (*consommé*), because the seller must become a buyer. To arrive at the consummation, or completion (*consommation*) there are required four terms and three contractors.

Consumption is the measure of reproduction, because products which remain without consumption degenerate into superfluities without value.

[1] *Quesnay; Dialogue sur les travaux des artisans.*
[2] *Le Trosne; De l'intérêt social, ch. ii.*

We therefore see clearly what the Physiocrates meant by Production and Consumption, and an Exchange or Commerce: Commerce being the complete passage of a product from the place of production to the place of consumption; from the first seller to the last buyer-consumer (*acheteur-consommateur.*)[1]

The Physiocrates held all labour, except only agricultural, to be sterile and unproductive, because it did not increase the quantity of material products: and that neither labour nor commerce enrich a state.

But Beccaria (1769) and Verri (1772) in Italy; Smith (1776) in England; and Condillac (1776) in France rose up against the doctrine that manufactures and commerce are not productive of wealth.

Now it is clear that the words Production and Consumption, as hitherto used, are complex terms, involving several ideas; and we must now, in accordance with the canons we laid down concerning the formation of General Conceptions, ascertain the single general idea which each of them represents.

On Production.

Smith says that Capital may be employed productively in four different ways, and that all persons who are engaged in these operations are productive labourers.[2] But, unfortunately, though he enumerates several methods of employing capital productively, and several classes of persons whom he denominates *productive* labourers, he gives no *definition* of what Production is, and we shall have to shew hereafter that he is very inconsistent with himself on the subject of Productive Labour.

J. B. Say rightly adopted the extended meaning of productive labour given by Smith and Condillac, and felt it necessary to enlarge the original definition of the word. He says[3]:— "We cannot create objects: the mass of matter of which the world is composed can neither be increased nor diminished. All that we can do is to reproduce these matters under another form, which makes them fit for some purpose which they had not before. Hence there is creation, not of matter, but of utility, and as this utility gives them value, there is *Production of Wealth.*

"This is the meaning of Production in Political Economy,

[1] *Mercier de la Rivière; L'ordre naturel des sociétés politiques, ch.* xii.
[2] *Book II., ch.* 5. [3] *Traité, Book I., ch.* 1.

and in this work. Production is not the creation of matter, but the creation of utility. It is not measured by the length, the volume, or the weight of the product, but by the utility which has been conferred. There is then truly Production of Wealth, where there is creation or increase of utility."

Say also adopts Smith's enumeration of Productive labourers, agricultural, manufacturing, and commercial: and he says that commercial industry contributes to production by raising the value of a product by its transport from one place to another.

So again he says[1] that Production is to give a recognized value to anything which makes it capable of procuring something else in exchange of equal value; and that commercial production is the creation of a value obtained by the transport or the distribution to consumers of products already existing.

So again he says[2]—"We cannot bring out of nothing a single particle of matter; we cannot even send back a single particle into nothing; but we can call out of nothing the qualities which make matter, which had no value previously, acquire a value, and become wealth. It is in this that Production consists in Political Economy. There is the miracle of human industry: and the things to which value is thus given are termed PRODUCTS.

"To create products, not being able to create matter, the action of industry is necessarily confined to separating, combining, and transporting the molecules of which it is composed. It changes the state of matter, and that is all: and by this change of state it makes it fit to serve us."

Now so far as regards matter and material products, this is undoubtedly true: but J. B. Say himself makes immaterial products an integral part of Economics, and treats them as Wealth and Capital, just in the same manner as material products. He says that the sciences, and talents of professional men, are capital which give a revenue, and how are these sciences and talents formed out of the particles of matter? They are the pure products of thought. But those who provide them when they are wanted, are evidently as much producers as the producers of material products.

Say also admits Rights, such as Commercial Obligations of all sorts, Copyrights, &c., to be Wealth: but how are these Rights formed out of particles of matter?

[1] *Epitome at the end of the Traité.* [2] *Cours, Part I.; Div. I., ch. IV.*

Mr. Mill says [1]—"The production of wealth: the extraction of the instruments of human subsistence and enjoyment from the materials of the globe." And though the first book of his work is devoted to Production, he gives no further definition of it. In it he enumerates the different kind of labourers whom he considers to be productive. However, in a subsequent part of his work he admits that transport in commerce is one species of production—He says [2]—"Improvements in production; understanding the last expression in its widest sense to include the process of procuring commodities from a distance, as well as that of producing them."

So Malthus defines Production to be [3]—"The creation of objects which constitute wealth."

So Destutt de Tracy says [4]—"Not only can we never create anything, but it is impossible for us to conceive what it is to *create* or to *annihilate*, if we rigorously understand by the words to make something out of nothing, or to reduce something to nothing; for we have never seen anything come out of nothing, or return to it. Thence the axiom admitted by all antiquity—Nothing can come from nothing, and Nothing can go back into nothing. What, then, do we do by our labour, by our action on all the things which surround us? Never anything but effecting on these things changes of form, or place, which apply them to our use, and which make them useful to the satisfaction of our wants. That is what we must understand by *Producing;* it is to give things a utility they had not before. Whatever our labour may be if it does not result in a utility it is unfruitful; if it results in one it is productive."

We need not give any more extracts, because it is certain that these sufficiently represent the general use of the word Production by Economical writers. Now we observe that the general drift of all these discussions on production is to consider the process by which the product is obtained. Now if this were a true view of the Economic meaning of *Production*, it would follow that when we treated of the "Production of Wealth" in Economics, we should have to investigate the whole science and art of agriculture, of mining, and all the processes

[1] *Preliminary Remarks.* [2] *Book IV., c.* 8, § 1.
[3] *Definitions in Political Economy, p.* 235.
[4] *Traité d'économie politique, p.* 82.

in manufactures of every description, and all trades, because all these things are the production of wealth according to the definition given above. But this is a complete error. Every Economist would at once say that this is a complete misconception of the subject. Economics has nothing to do with any of the processes of agriculture, mining, manufacturing or the handicraft of any workman, but only with the *value* of the product when obtained. A product does not enter into the science of Economics until it enters into commerce, and seeks to be exchanged, and the sole purport and aim of Economics is to determine the relative quantities of other products it can be exchanged for. The earliest Economists over and over again said that the science has nothing to do with products which are obtained and enjoyed by their producers without being exchanged. And Whately[1], Bastiat[2], and Perry[3], already quoted, clearly enforce the same doctrine. By dwelling so much, therefore, on the process of obtaining products, these Economists have given a wrong direction to the ideas of their readers, so far as regards Economics, and we must now ascertain what is the true Economic meaning of *Production*.

To ascertain this, we have only to look at the primary and original meaning of *Producere* in Latin: it is to lead or bring forth; and it is the technical word used for *exposing to sale*. Thus Terence, *Eunuchus*, Act I., sc. 2, l. 55, says:—

"Pretium sperans illico
PRODUCIT: vendit."

Hoping for a good price, offers her there for sale; sells her.

Again in the *Heauton Timorumenos*, Act I., sc. 1, l. 90:

"Ancillas, servos * * *
Omnes PRODUXI, ac vendidi."

All the slaves, male and female, I offered for sale, and sold.

So also Suetonius, *De illus. gram.* c 4, says:—"Quum familia alicujus venalis produceretur"—*When any one's household slaves were offered for sale.*

And the original sense of Produce in English is exactly the same as in Latin. It is to draw forth, to cause to come near. Thus in Isaiah xli., 21, it is said: "*Produce* your cause, saith

[1] *p.* 100. [2] *p.* 101. *p.* 122.

the Lord; bring forth your strong reasons, says the King of Jacob." And the marginal note says, "Produce—cause to come near."

So Shakespeare says—*Julius Cæsar*, Act III., sc. 1:—

> *Antony.* "That's all I seek:
> And am moreover suitor that I may
> PRODUCE his body to the market place.

So in *Lear*, Act 5, sc. 3:—

> *Alb.* PRODUCE their bodies, be they alive or dead.

So to produce a thing is simply to bring it forward, and place it where it is wanted. If a witness is told to *produce* a deed or other document in court, it means that he is to bring it into court and place it there. So a gaoler is ordered to *produce* the body of his prisoner in court, which means that he is to place him there: so a cause may be adjourned for the *production* of a witness or a document: and this meaning is so common that it requires no more examples to illustrate it.

In the universal language of Commerce the *Producer* is the person who offers any article for sale. When it is said that the turn of the market is in favour of, or against, the Producer, it means that it is for or against the seller.

So also in French the primary and original meaning of Produire is *Pousser en avant*; and of Production is *Action de produire, de mettre en avant.*

And this is the true meaning of the words *Produce* and *Production* in Economics. They mean to bring into the market and offer for sale or exchange. Economics has nothing to do with any quantity whatever except so far as it is offered for sale; and any person who offers anything for sale is, in Economics, a Producer, no matter how he came by it; and whatever quantity is offered for sale is a product, whatever its nature.

Thus Agriculturists, Miners, Fishermen, Hunters are producers, because, knowing that people require food, clothing, and fuel, they bestow their labour in obtaining corn, and cattle, and fish, and coals, iron, &c., and offer these things in exchange for something else.

[1] *Littré; Dictionnaire de la Langue Francaise.*

So Manufacturers and Artisans of all sorts are Producers, because, knowing that the raw produce of the earth is scarcely ever fit for human use in its primitive state, they purchase this raw produce from the first Producers of it, and bestow their labour in manufacturing or fashioning it in all sorts of different ways; in grinding the corn into flour, or in baking the flour into bread, or in weaving the wool from the flock, or in any other of the countless processes of the arts, and then offer the manufactured or fashioned product in exchange for something else.

So Merchants, Wholesale and Retail Dealers, are Producers, because, knowing that the people of one country want the products grown in other countries, or that people in one place want the things grown or manufactured or fashioned in another, they bestow their labour in transporting things from one country to another, or from one place to another, and offer the things they have thus brought in exchange for something else.

Hence all production is summed up in placing an object where it is required. So far as regards the customer who wants the article, the tradesman in whose shop he finds it is the Producer. What difference can it make whether that tradesman paid wages to workmen in his direct employment, and carried the article from his workshop to his counter, or pays an independent manufacturer 300 miles off, and has it transported to his own shop?

But man has many other wants besides physical ones which can be gratified with material substances. He wants services and enjoyments of many kinds, and he is willing to give something in exchange for, or to pay for these services and enjoyments; and those persons who can render these services or supply these enjoyments are equally Producers as those who produce material substances.

Thus men want to be protected in their legal rights, and to have disputes among them settled, or to be healed of diseases, or services of many other descriptions too long to enumerate: and so some men bestow their labour in acquiring a knowledge of law, of medicine, of civil engineering, and all the other various professions and sciences, and are ready to *produce* or offer these services in exchange for something else.

So people like the enjoyment of seeing acting and dancing, or hearing music, and therefore some men bestow their labour in acquiring skill in these things, and offer them in exchange for payment.

Now the meaning of every term must be fixed and appropriated in every science in a manner which is suitable to that science, and nothing is more common than for the same word to have different technical senses in different sciences; and therefore we say that, though in treating of the art of agriculture, mining, and the various manufactures and trades, the word production may be very aptly applied to the various processes of the different trades, yet such a meaning is not suitable to the science of Economics; and that the only true meaning of "Produce" in Economics is to offer for sale; and that the true Economic meaning of "Production" is offering for sale.

A great poet may *produce* a great poem; a great artist may *produce* a great picture; a great sculptor may *produce* a great statue; we may estimate their merits most highly—they may be classed among the brightest products of human genius: but how are we to estimate their money value? Now though the poem, the picture, the statue may be produced in nature, or called into existence, they are not produced in Economics until they are brought into the market and offered for sale.

On Consumption.

The word Consumption as hitherto used in Economics, is also a complex term, for while production was used to mean obtaining a product and bringing it into commerce, Consumption, or *Consommation* as the French word is, was used by the Physiocrates to mean purchasing a product, taking it out of commerce, and using or enjoying it. And as a considerable part of Economical products were the fruits of the earth, which are destroyed in their use and enjoyment, this secondary and accidental sense of destruction came to be considered as the primary one.

Smith uses the words "consume," "consumption" and "consumable goods," but, as usual, gives no definition of what he means by them. The introduction to the *Wealth of Nations* opens thus—"The annual labour of every nation is the fund

which originally supplies it with all the necessaries and conveniences of life which it annually *consumes*, and which consist always either in the immediate produce of that labour, or in what is purchased with that produce from other nations.

"According, therefore, as this produce, or what is purchased with it, bears a greater or smaller proportion to the number of those who are to *consume* it, the nation will be better or worse supplied with all the necessaries and conveniences for which it has occasion."

In Book II., ch. 1, he says that when a man possesses sufficient stock to maintain him for months, or years, he "naturally endeavours to derive a revenue from the greater part of it, reserving only so much for his immediate *consumption*, as may maintain him till this revenue begins to come in."

He also says in the same chapter that as floating capital is to be classed "money, by means of which all the other three, are circulated and *distributed* to their proper *consumers*."

In chap. ii. of the same Book he says:—"Though the weekly or yearly revenue of all the different inhabitants of every country in the same manner may be, and in reality frequently is, paid to them in money; their real riches, however, the real weekly or yearly revenue of all of them taken together, must always be great or small in proportion to the quantity of *consumable goods* which they can all of them purchase with this money. The whole revenue of all of them taken together is evidently not equal to both the money and the *consumable goods*, but only to one or other of these two values, and to the latter more properly than to the former.

"Though we frequently, therefore, express a person's revenue by the metal pieces which are annually paid to him, it is because the amount of these pieces regulates the extent of his power of *purchasing*, or the value of the goods which he can annually afford to *consume*. We still consider his revenue as consisting in this power of *purchasing* or *consuming*, and not in the pieces which convey it."

And further on in the same chapter, after shewing that the use of money is to circulate, and *distribute* these consumable goods to their proper owners, speaking of a banker's notes, he says that:—"The same exchanges may be made, the same quantity of *consumable goods* may be circulated and *distributed* to

their proper *consumers* by means of his promissory notes to the value of £100,000, as by an equal value of gold and silver."

In Book IV. ch. 8, he says—"Consumption is the sole end and purpose of all Production; and the interest of the producer ought to be attended to only so far as it may be necessary for promoting that of the consumer. The maxim is so perfectly self-evident, that it would be absurd to attempt to prove it. But in the mercantile system, the interest of the consumer is almost constantly sacrificed to that of the producer; and it seems to consider production, and not consumption, as the ultimate end and object of all industry and commerce." And in a great number of other passages, which we need not quote, Smith evidently means the purchaser by the word consumer.

J. B. Say says[1]—"The reader must understand that as Production is not the creation of matter, but the *creation of utility*, so consumption is not the destruction of matter, but the *destruction of utility*. The utility of a thing once destroyed, the first foundation of its value, which made it be sought for, which establishes the *demand* for it, is destroyed. Thenceforth it has no value; it is not a portion of wealth.

"Hence, to *consume* (*consommer*), *to destroy the value of things*, *to annihilate their value*, are expressions whose meaning is absolutely the same, and corresponds to that of the words *produce*, *give utility*, *create value*, whose meaning is also the same.

"All consumption, being the destruction of value, is not measured by the volume, the number, or the weight of the products consumed, but by their value," and so on.

Again he says[2]:—

CONSOMMATEUR: Is he who destroys the value of a product, either to produce another, or to satisfy his tastes or wants.

CONSOMMATION: CONSOMMER: to consume (*consommer*) is to destroy the value of a thing, or a portion of its value, by destroying the utility which it had, or a portion of that utility.

We cannot consume (*consommer*) that which cannot be destroyed. Thus we can consume the service of an industry, and not the industrial faculty which has rendered this service: the service of land, but not the land itself.

[1] *Traité, div. III., ch. 1.*

[2] *Epitome at the end of the Traité.*

"A value cannot be consumed twice; for to say that a thing is consumed is to say that it does not exist any more.

"Everything which is produced is consumed; therefore every value created is destroyed, and was only created to be destroyed."

Again he says [1]—"The most immediate effect of every kind of consumption (*consommation*) is the loss of value and therefore of wealth, which follows for the possessor of the product consumed (*consommé*). This effect is constant, inevitable, and we must never lose sight of it in reasoning on these matters. A product consumed (*consommé*) is a value lost for all the world and for ever."

And this meaning of consumption as destruction has been widely adopted by writers. Thus Malthus says [2]:—"*Consumption;* the destruction, wholly or in part, of any portions of wealth;" and "Consumption is the great purpose and end of all production."

So McCulloch says:—"By consumption is meant the annihilation of those qualities which render commodities useful or desirable. To consume the products of art and industry is to deprive the matter of which they consist of utility, and consequently of the exchangeable value communicated to it by labour. Consumption is, in fact, the end and object of human exertion; and when a commodity is in a fit state to be used, if its consumption be deferred, a loss is incurred." [3]

To this, Senior has well answered [4]—"That almost all that is produced is destroyed, is true; but we cannot admit that it is produced for the purpose of being destroyed. It is produced for the purpose of being made use of. Its destruction is an incident to its use, not only not intended, but as far as possible avoided. In fact there are some things which seem unsusceptible of destruction, except by accidental injury. A statue in a gallery, or a medal, or a gem in a cabinet may be preserved for centuries without apparent deterioration. There are others, such as food and fuel which perish in the very act of using them, and hence as these are the most essential commodities, the word consumption has been applied universally as expressing the making use of anything. But the bulk of commodities are de-

[1] *Traité, L. III., c. 2.* [2] *Definitions on Political Economy, p. 247.*
[3] *Principles of Political Economy, p. 511.* [4] *Political Economy, p. 54.*

stroyed by those numerous gradual agents which we call collectively *time*, and the action of which we strive to retard. If it be true that consumption is the object of all production, the inhabitant of a house must be termed its consumer, but it would be strange to call him its destroyer; since it would unquestionably be destroyed much sooner if uninhabited. It would be an improvement in the language of Political Economy if the expression 'to use' could be substituted for that 'to consume.'" At p. 14 Senior observes that "Demand is sometimes used as synonymous with consumption."

In fact it is astonishing that men of ability should maintain such a monstrous paradox as that everything which is produced is destroyed; that it is only produced for the purpose of being destroyed; and that if it is not destroyed, a loss is incurred.

An architect builds a splendid Palace. He, the builders, and the workmen, are, in the language of Economists, *Producers;* the palace is a *product;* are palaces produced for the purpose of being destroyed; and is a loss incurred if they are not destroyed immediately they are produced?

An artist *produces* a great picture: does he produce it for the purpose of destroying it? And is loss incurred if it is not destroyed as soon as produced?

A sculptor *produces* a great statue: does he produce it for the purpose of its being destroyed? And is a loss incurred if it is not broken in pieces immediately that it is produced?

J. B. Say says[1]—"The English succeed in making very fine glass for mirrors, and could supply them at a very moderate price, if the enormous duties laid on the manufacture of glass in England, did not raise the product to a price which many consumers (*consommateurs*) cannot afford."

Now did the Consumers of the mirrors smash them? Were the mirrors produced for the purpose of being smashed? And was a loss incurred if they were not smashed immediately they were produced?

It is said in Gil Blas, B. iv., c. 6.—"A book in great esteem among the students who have already consumed (*consommé*) four editions of it." Now did the students buy these four editions for the purpose of destroying them?

[1] *Cours, part III., ch.* 3.

Johnson explaining the elementary principles of trade to Dr. Wetherell, Master of University College, Oxford, says[1]— "Here are three profits to be paid between the printer and the reader, or in the style of commerce, between the manufacturer and the *consumer:* and if any of these profits be too penuriously *distributed* the process of commerce is interrupted."

Now do the consumers or readers of books purposely destroy them? Are books produced for the purpose of being destroyed? And is a loss incurred if they are not destroyed?

There are vast quantities of furniture produced which seem absolutely indestructible except by violence, if properly protected. The Scythian war chariot, the unique glory of the Florentine Museum, seems to be made of wood which has attained the solidity of iron, and shews that wood may be as durable as marble. Now carpenters produce massive bookshelves and massive tables. Are these bookshelves and tables produced for the purpose of being destroyed? And is a loss incurred if they are not destroyed? So far from their being destroyed there seems to be absolutely no limit to their durability. The Scythian war chariot is contemporary with Abraham, and it is as fresh as the day it was made.

We need not multiply any more instances, as multitudes will occur to any one who thinks on the subject for an instant. But it clearly appears that if Consumption means destruction, the doctrine that consumption is the end of all production is manifestly false; and to say that a loss is incurred if things are not destroyed as soon as they are produced, is an absurdity so great that we can only marvel how men of ability could put such a thing into their books.

In fact, this doctrine is only another example of that careless and hasty generalization which has caused so much mischief in Economics. It is true that *some* things, such as food and fuel, are produced for the purpose of being destroyed: destruction is essential to their use. But there are many other things of which destruction is only incidental to their use, such as clothes and many other things; and also a vast number of things do gradually waste away in the course of time; such as houses, watches, and innumerable other things; but, so far from being purposely destroyed, the greatest care is taken to preserve

[1] *Boswell, sub anno* 1776, *Vol. II., p.* 414, *Edit.* 1822.

them and to keep them in repair; and there are multitudes of other things which are absolutely indestructible except by violence.

But, even though it be said that the majority of things do wear away in the course of time, Economics has nothing to do with their destruction. As Economics has nothing to do with the various processes by which products are obtained; but a product only enters into Economics when it enters into commerce; so when it is purchased and passes out of commerce it passes out of Economics; and Economics has nothing to do with the mode in which products are used or destroyed. The Economic phenomenon is nothing but the exchange.

In the language of commerce the Consumer means simply the buyer. When Say speaks of the consumers (*consommateurs*) of the mirrors, he means merely the buyers of them. He himself says[1]—"The Consumers (*consommateurs*) of products are their buyers." When it was said in Gil Blas that four editions of the book were consumed, it only means that they were bought. When Dr. Johnson speaks also of the Consumer, he means only the buyer. In the language of Commerce, Producer and Consumer mean only seller and buyer; Production and Consumption together constitute exchange, which is the true field and limit of Economics, and it is by divagating from the true limits of the science that Economists have caused all the confusion. Bastiat well says[2]—"In general we devote ourselves to a trade, a profession or a career; and it is not from that that we expect directly the object of our satisfaction. We render and we receive services; we offer and we demand values; we make purchases and sales: we labour for others, and others labour for us: in a word we are *Producers* and *Consumers*."

By using the terms Production and Consumption in their true and strict commercial sense we are enabled to get rid of the term Distribution. The Physiocrates used commerce and exchange to mean the whole passage of a product from its first seller (*producteur*) through a series of exchanges to its last purchaser (*acheteur-consommateur*), the intermediate exchanges were denominated *traffic*. But as a matter of fact, each of these transactions is a separate and independent exchange, and an

[1] *Traité*, p. 349.

[2] *Harmonies Economiques. Art. Producteur Consommateur*, p. 360.

Economic phenomenon. The farmer grows the corn, and *produces* it, *i.e.*, offers it for sale in the market. It then enters Commerce and Economics. The miller buys it from the farmer: he is the customer or consumer. That is one exchange, or Economic phenomenon. The miller grinds the corn, and *produces*, or offers it for sale to the baker, who is the customer, or purchaser, or consumer of the flour. That is another exchange, or Economic phenomenon. The baker bakes the flour into bread, and *produces*, or offers the bread for sale in his shop, and the public come and buy the bread in his shop. They are the buyers, customers, or consumers of the bread. There is a third exchange, or Economic phenomenon. Then the bread passes out of commerce and Economics, into use and enjoyment. Now here is a separate series of exchanges; each wholly independent of the others; each an Economic phenomenon; and all governed by the same great general law. And of course an analogous course of reasoning applies to all products. Thus the term Distribution is absorbed in Production and Consumption.

Sometimes, however, Distribution is used in the same sense as Consumption. Thus, Turgot entitles his work *Réflexions sur la Formation et Distribution des Richesses.*" So Smith says[1]—"The causes of this improvement in the productive powers of labour, and the order according to which its produce is naturally *distributed* among the different ranks and conditions of men in the society make the subject of the First Book of this Inquiry." Senior defines[2] Political Economy to be the Nature, Production, and Distribution of Wealth. Now by Distribution these writers mean consumption, or purchase. Smith says[3]—"The metal pieces of which it (money) is composed in the course of their annual circulation *distribute* to every man the revenue which properly belongs to him." And a little further on he says—"The same exchanges may be made, the same quantity of *consumable goods* may be circulated and *distributed* to their proper *consumers*" by paper as by money. When Economists spoke of Distribution they invariably meant Distribution by means of an exchange. For how is wealth distributed? By no other method than that of exchange. If a man wants to have bread distributed to him, he must have

[1] *Introduction to Wealth of Nations.* [2] *Political Economy; Introduction.*
[3] *Wealth of Nations, Book II., c. 2.*

something to give in exchange for it, such as shoes or other things. And if a man wants shoes distributed to him he must have something such as bread to give in exchange for them. Hence the shoemaker and the baker are each producers, and the reciprocal distribution, or consumption of each other's produce is an exchange. Hence we see that the *Production, Distribution, and Consumption of Wealth*, the *Production and Distribution of Wealth*, and the *Production and Consumption of Wealth* are identical expressions, and absolutely equivalent to *Exchange*.

Much of the confusion has no doubt arisen from writers neglecting to attend to the true and original meaning of the word. The technical words in English are no doubt Consumer and Consumption, which appear to infer destruction, but we have seen that Consumer means buyer in commercial language. But the French have two words *Consomption* from *Consumer*, from the Latin *Consumere*, meaning destruction; and *Consommation* from *Consommer* from the Latin *Consummare*. Now the technical word invariably used in French Economics is *Consommation*, which comes from the Latin *Consummatio*. Now the primary meaning given to *Consommer* in Littré's splendid French dictionary is *achever, accomplir;* and he quotes from La Fontaine—"En peu de jours il *consomma* l'affaire;" and from Pascal—"On va achever et *consommer* la demonstration." Where *consommer* means to finish or complete.

So an ingenious Frenchman who made an excellent translation of Wolfe's beautiful *Burial of Sir John Moore*, and tried to palm it off upon the world as the original, written in French in honour of a Colonel de Beaumanoir, who is said to have been killed at the siege of Pondicherry in 1761, and from which the English poem was said to be plagiarized, thus renders the last stanza:—

Et dans la fosse alors le mîmes lentement,
Pres du champ ou sa gloire a été *consommée;*
Nous mîmes à l'endroit, ni pierre ni monument,
Le laissant seul à seul avec sa renommée.

And exactly in the same sense Le Trosne says[1]—"Il y a cette difference entre l'échange et la vente, que dans l'échange tout est *consommé* pour chacune des parties: elles ont la chose qu'elles

[1] *De l'interêt social, ch. II.*

voudraient se procurer, et n'ont plus qu'à jouir. Dans la vente, au contraire, il n'y a que l'acheteur qui ait rempli son objet parce qu'il n'y a que lui qui soit à portée de jouir. Mais tout n'est pas *terminé* pour le vendeur."

And again[1]—"L'échange arrive directement au but, qui est la *consommation;* il n'a que deux termes, et se termine par un seul contrat. Mais un contrat où l'argent intervient n'est pas *consommé*, puisqu'il faut que le vendeur devienne acheteur, ou par lui-même ou par l'interposition de celui auquel il transportera son argent. Il y a donc, pour aboutir à la consommation qui est l'objet ultérieur, au moins quatre termes et trois contractants, dont l'un intervient deux fois."

So Blanqui says[2]—"Toutes les transactions devaient se *consommer* par forme d'échange."

So *Consommation* means primarily *achèvement, accomplissement.*

So the technical word in Italian Economics is *Consumazione*, which like *Consommation*, is the Latin *Consummatio*, completion, accomplishment.

For who is the Consumer? He is the person who consummates, completes, or accomplishes the work of the producer. The producer brings forward something, and offers it for sale. But it is the purchaser who gives value to it; it is he who crowns the work, and consummates the desire of the producer, and completes the transaction, by purchasing the product and thereby giving it value. Le Trosne and the Physiocrates most justly said that only an exchange is complete. A shoemaker wants bread, and the baker wants shoes. They exchange their products; and the desire of each is accomplished, completed. But if a shoemaker sells his shoes for money, his desire is not accomplished, or completed. He still has to exchange away the money for bread. And the same is true of the baker, and of every other producer.

Hence we perceive that the English word Consumption is liable to suggest wrong ideas, unless we carefully remember that the Consumer means nothing but the purchaser.

The general result of this investigation is to shew that there is no real difference at all between the second and the third

[1] *De l'interêt social, ch. III.* [2] *Histoire de l'économie politique, Vol. I., p.* 194.

school of Economists: when the one school says that Political Economy is the Science which treats of the Production, Distribution, and Consumption of Wealth, and the other says that it is the Science of Exchanges, they mean identically the same thing. But though when the terms are explained, they are proved to be identical, yet the great superiority of the latter definition over the former is apparent. Every one knows what an exchange is; and when it is said that Economics is the Science of Exchanges, and that anything which can be exchanged is an Economic Quantity, every one can at once perceive the nature, the objects, and the limits of the science. But when it is said that it is the science which treats of the *Production, Distribution and Consumption of Wealth*, each of these words requires a long explanation of the technical meaning in which it is to be understood. And we have already pointed out how numerous transactions evidently are included in the science of exchanges, which are only with great difficulty and much explanation included under the Production, Distribution and Consumption of Wealth.[1]

We therefore eliminate all ideas of destruction from the technical conception of Consumption in Economics, and leave only purchase as the true general meaning. We have seen that it is entirely erroneous to assert that everything is produced for the purpose of being destroyed: and that if Consumption means destruction, it is not true to say that Consumption is the end of all Production. Still less true is it to say that if Consumption be deferred, a loss is incurred. But when we see that Consumption is merely purchase, then it is true to say that Consumption is the end of all Production; because Production means offering something in exchange, and Consumption means taking it in exchange. So also it is true that the quicker Consumption is, the more profit there is, and the slower Consumption takes place, the less profit there is. We have shewn under *Rate of Profit*, that a profit made in a day is seven times a greater Rate of Profit than a Profit made in a week: and of course the longer it is deferred the less it becomes. So if his product is not consumed, or purchased at all, it is a total loss to the producer, and he has lost the reward of his labour, as it is only consumption which constitutes his product wealth, and his

[1] *Ante, p.* 108.

labour is not consummated, or completed, until he has got a reward for it. A shoemaker does not want a thousand pair of shoes; what he wants is something in exchange for them—bread, clothes, fuel, house room, &c., either directly, or the means of obtaining these things, which is money; and unless his shoes are consumed, or bought, he can get no satisfaction for his labour which is thrown away, and not completed. So a baker does not want a thousand loaves of bread, but like the shoemaker, he wants the other necessaries, conveniences, and enjoyments of life, which he can get in exchange for them. So a wine merchant does not want his hogsheads of port and claret, or his butts of sherry: a cloth merchant does not want his miles of cloth: a farmer does not want his acres of corn, or his herds of cattle: a coal owner does not want his shiploads of coal: but each and all of them want the other necessaries and conveniences and amusements of life which they can get in exchange for them. A company of actors do not perform a play, nor a troupe of opera dancers execute a ballet, for their own delectation, but for what they can get in exchange for it; and their labour is productive just as it does or does not bring in returns. So no producer wants the things which he himself produces, but only what he can get in exchange for them, and the faster he can gain things in exchange for his products the faster he increases in wealth. Hence we see that in this sense, which was the one given to it by those who originated it, it is true that Consumption is the end of all Production; and that the faster the consumption takes place the greater is the increase in opulence. And as Production and Consumption constitute exchange, it is rapidity of exchange which leads to national opulence.

A country which abounds with gold and silver coin cannot properly be said to be wealthy any more than one which abounds with machinery. So long as these stand idle the country must remain poor, like a manufacturing town in a strike. It is their motion or circulation which generates wealth, and the rapidity of that circulation which indicates the rate of increase or progress. This consideration will enable us to solve a question which was long agitated by Economists and statesmen. Which employment conduces most to national opulence? From the time of Colbert to the French Revolution, the question whether

the towns or the country most conduced to national wealth was keenly disputed, and according as one side or the other prevailed, the one was encouraged and cockered, and the other depressed. Now, as the velocity of the circulation indicates the rate of progress, whatever employment causes currency to circulate with the greatest rapidity, most augments national opulence. Currency is the engine of circulation, and industry is its motive power, whichever species of industry drives the engine fastest, most rapidly augments the national wealth. Now it is well known that of all species of industry, agriculture causes the most languid circulation of the currency. By offering an extra stimulus of reward, the productions of human industry can be multiplied and quickened to an extraordinary extent, but the process of nature is slow, and cannot be accelerated at command. Different trading pursuits cause a brisker circulation in different degrees—all much faster than agriculture. Hence a purely agricultural country must increase slower in opulence than any other, and other countries very much in the proportion of their inhabitants engaged in agriculture, as compared to other pursuits. Experience amply verifies this remark. Poland and other countries, which have few resources but agriculture, are the poorest and most barbarous in Europe. Great Britain and Holland, in which the smallest proportion of the inhabitants are engaged in raising food for the rest, are the wealthiest, and other countries very much in similar proportions. The instances are not many in which people have made fortunes by agriculture, but there is scarcely probably a small country town, where some industrious and energetic individuals have not realized a competence by trading.

On Supply *and* Demand.

34. Supply and Demand are sometimes supposed to be equivalent to Production and Consumption. Senior, we have seen above, says that Consumption is sometimes used as equivalent to Demand. Now Production and Supply are absolutely equivalent. The quantity offered for sale, the quantity produced, and the quantity supplied are identical terms. But Demand is by no means equivalent to Consumption.

Demand is a desire to possess something, but unless persons possess something to give in exchange for what they want to obtain, they can give no effect to their desire: and unless they can do so, no Economic phenomenon takes place.

It is easy to see that Demand is not the same thing as Consumption. Suppose, as very often happens in a country district, there is a certain quantity of milk, butter, eggs, poultry, &c. produced. The country people are accustomed to buy or consume all this produce at a certain price. There is, therefore, a certain amount of Production and Consumption. But the place, perhaps, becomes fashionable: a number of rich persons crowd in, and prices rise immensely: but the same quantity of products are consumed. Now there is the same Production and the same Consumption. There is the same Supply, but not the same Demand. If rich people crowd in and outbid poor ones, and give a higher price than the country people can do, there is a greater Demand. When prices rise above a certain point, however persons may wish to possess the object, if they cannot give these prices they cease to buy, and therefore in an Economic sense they cease to Demand. Demand, therefore, in Economics must mean the *desire and the power to purchase*, and, of course, the more intense the desire and the greater the power to purchase, the greater is the Demand.

Hence we may say that, while Production and Consumption constitute exchange, the relative numerical quantities in which the respective products will exchange are determined by Supply and Demand.

And here we may observe is the great, radical and fundamental difference between the Second and Third Schools of Economists. We have shewn that their Definitions of the Science are absolutely identical. But the real difference between them lies in their doctrine of the cause, or origin, of Value. The second school of Economists chiefly, and some exclusively, look to the Labour of the Producer as the cause or origin of Value. But the Physiocrates, the third school, Condillac, Whately, Bastiat, the Italian Economists, Verri, Beccaria, Genovesi, and ourselves look entirely to the Demand of the Consumer as the sole origin and source of Value, as is fully exhibited in the next chapter.

On Productive *and* Unproductive Labour.

35. There is no part of Smith's work which has been so unanimously condemned even by his warmest admirers, or in which he is so contradictory to himself and to common parlance, as in his doctrine of Productive and Unproductive Labour.

The Physiocrates restricted the term Productive Labour to obtaining an increase of quantity of the raw products of the earth. All other labourers, all artificers, all merchants and traders they classed as sterile or unproductive, because they said that in manufactures the increased value bestowed on them by labour only replaced the products consumed by the artisans during the work, and in commerce there was only an exchange of equal values: and, therefore, in neither case was there any increase of Wealth. This designation of so many and powerful classes of society as sterile or unproductive labourers raised a great clamour against them, as if they had meant it as an insult. But the Physiocrates very justly replied that they did not mean this term in a disparaging or humiliating sense, but purely as a matter of scientific classification. They acknowledged that the labour of these classes was honourable, useful, and indeed indispensable, but they did not term it Productive in a scientific sense. Their answer was perfectly just, but their scientific classification was soon demonstrated to be erroneous.

Among others, Smith attacked it[1] and says—"The third is the class of artificers, manufacturers, and merchants, whom they endeavour to degrade by the humiliating appellation of the barren or unproductive class." We shall soon see whether Smith has not fallen into exactly the same error as he charged upon the Physiocrates.

He says[2]—"There is one sort of labour which adds to the value of the subject upon which it is bestowed: there is another which has no such effect. The former as it produces a value may be called productive, the latter unproductive labour. Thus the labour of a manufacturer adds generally to the value of the materials which he works upon that of his own maintenance, and of his master's profits." Smith then enlarges the term Productive Labour to include manufacturing, and commercial

[1] *Wealth of Nations, Book IV., c.* 9.
[2] *Ibid., Book II., ch.* 3.

labour of all sorts, as well as agricultural. But there he unaccountably stops, and bans all other labourers as unproductive, or in his own words, endeavours to degrade them by the humiliating appellation of barren or unproductive.

In continuation of the passage just given, he says:—"The labour of a menial servant, on the contrary, adds to the value of nothing. Though the manufacturer has his wages advanced to him by his master, he in reality costs him no expense, the value of these wages being generally restored with a profit, in the improved value of the subject upon which his labour is bestowed; but the maintenance of a menial servant never is restored. A man grows rich by employing a multitude of manufacturers; he grows poor by maintaining a multitude of menial servants. The labour of the latter, however, has its value and deserves its reward as well as that of the former; but the labour of the manufacturer fixes and realizes itself in some vendible commodity, which lasts for some time at least after that labour is past. It is, as it were, a certain quantity of labour stocked and stored up to be employed, if necessary, upon some other occasion. That subject, or what is the same thing, the price of that subject, can afterwards, if necessary, put into motion a quantity of labour equal to that which had originally produced it. The labour of the menial servant, on the contrary, does not fix or realize itself in any particular subject or vendible commodity. His services generally perish in the very instant of their performance, and seldom leave any trace or value behind them for which an equal quantity of service could afterwards be procured."

Now according to Smith, the cook at an hotel is a productive labourer: she prepares, dresses, and cooks the various articles of food eaten by the guests. Her labour adds to their value, and is charged for in the bill: it is fixed and realized in a vendible commodity, which lasts for some time after that labour is passed: and her labour tends to the profit of the landlord; her wages are all repaid to him in his customers' bills.

But a cook in a gentleman's family who performs exactly the same functions is a menial servant, and therefore, according to Smith she is an unproductive labourer. Where is the sense of such a distinction? By Smith's own doctrine, the various articles of food are more valuable after she has dressed and

prepared them for table than they were in a raw state. Her labour is fixed and realized in material commodities which last after that labour is passed. When these two perform exactly the same functions and are equally paid for their services, why is the one productive and the other unproductive? So that if the cook at an hotel takes a place in a gentleman's family she is at once turned from a productive into an unproductive labourer! If a cook in a private family takes a place in an hotel, she from being an unproductive, becomes a productive labourer! It is obvious that such a distinction is mischievous, futile, and contrary to common sense.

Again Smith allows all the various persons engaged in extracting the coal from the mine, transporting it to distant places, and placing it in a gentleman's cellar to be productive labourers; but the footman who carries it from the cellar to the drawing-room grate is a menial, and therefore an unproductive labourer. By Smith's own doctrine the labour of each of the series of persons who extract and transport the coal to the cellar adds to its value, and therefore for the same reason the labour of the footman who carries it from the cellar to the drawing-room adds to its value. The terminus *à quo* the coal starts is the mine, the terminus *ad quem* it is to arrive, is the drawing-room grate: and why is the labourer who transports it from the mine to the cellar productive, and the labourer who transports it from the cellar to the grate unproductive? The labour of each is equally necessary, and equally paid for. It is obvious that such a distinction is mischievous, futile, and contrary to common sense.

Now why does a gentleman pay for a cook in an hotel or in his own house to dress his dinner? Simply to save himself the trouble of doing it for himself. Why does he pay the price for miners obtaining the coals, and dealers transporting it from place to place; and why does he pay wages to his footman to carry coals from the cellar to the drawing-room? Simply to save himself the trouble of doing so himself. And the same course of argument applies to everything else which is wanted and paid for. Now here are services wanted, demanded, produced or rendered, and paid for; and yet some are called productive and others unproductive. Is this not plainly contrary to all scientific classification?

Smith then continues—"The labour of some of the most respectable orders in the society is, like that of menial servants, unproductive of any value, and does not fix or realize itself in any permanent subject or vendible commodity which endures after that labour is past, and for which an equal quantity of labour could afterwards be procured. The sovereign, for example, with all the officers both of justice and war who serve under him, the whole army and navy, are unproductive labourers. They are the servants of the public, and are maintained by a part of the annual produce of the industry of other people. Their service how honourable, how useful, or how necessary soever, produces nothing for which an equal quantity of service can afterwards be procured. The protection, security, and defence of the commonwealth, the effect of their labour this year will not purchase its protection, security, and defence for the year to come. In the same class must be ranked some both of the gravest and most important, and some of the most frivolous professions; churchmen, lawyers, physicians, men of letters of all kinds; players, buffoons, musicians, opera singers, opera dancers, &c. The labour of the meanest of these has a certain value, regulated by the very same principles which regulate that of every other sort of labour; and that of the noblest and most useful produces nothing which could afterwards purchase or procure an equal quantity of labour. Like the declamation of the actor, the harangue of the orator, or the tune of the musician, the work of all of them perishes in the very instant of its production."

Now in reference to what Smith says about the protection, security, and defence of the commonwealth purchased by the labour of soldiers and sailors one year not purchasing its security and defence the year after, we may observe that the food a man eats one year, or the clothes, and fuel, which keep him warm one year will not keep him in life and warmth for the year to come, and yet Smith classes those who produce food, clothes, and fuel as productive labourers, and those who produce security and defence as unproductive labourers. Can anything be more futile?

Smith is moreover utterly inconsistent with himself, for he himself classes as wealth,[1] "the acquired and useful abilities

[1] *Book II., ch.* 1.

of all the inhabitants or members of the society. The acquisition of such talents, by the maintenance of the acquirer during his education, study, or apprenticeship, always costs a real expense, which is a capital fixed and realized as it were in his person. These talents as they make a part of his fortune, so do they likewise of that of the society to which he belongs. The improved dexterity of a workman may be considered in the same light as a machine or instrument of trade, which facilitates and abridges labour, and which though it costs a certain expense, repays that expense with a profit."

Again, he says:[1]—"A man educated, at the expense of much labour and time, to any of those employments which require extraordinary dexterity and skill, may be compared to one of these expensive machines. The work which he learns to perform, it must be expected, over and above the usual wages of common labour, will replace to him the whole expense of his education, with at least the ordinary profits of an equally valuable capital."

He also says:—"A man is rich or poor, according to the degree in which he can afford to enjoy the necessaries, conveniences and *amusements* of human life."

Surely, therefore, those men who can produce those sciences, knowledge, and amusements, which Smith acknowledges to be wealth, are productive labourers.

Accordingly, J. B. Say extended the term productive, to include all labour which was required and paid for:—"Whatever be the operations to which labour is applied, it is productive, because it aids in the creation of a product. Thus, the labour of the man of science, who makes experiments and books, is productive: the labour of the undertaker, although he does not directly apply his hand to the work, is productive; in short, any manual industry, from the labourer who digs the earth, to the sailor who handles a ship, is also productive."[2]

So also[3]—"LABOUR; a continued action directed towards an object. Labour is productive when it gives to anything a degree of utility, whence results for that thing, an exchangeable value, or an increase of exchangeable value, equal or superior to the value of the labour employed. Labour is also productive

[1] *Book I., ch. 10.* [2] *Traité, L. I., ch. vii.*
[3] *Epitome at the end of Traité.*

when it results in a service which has exchangeable value, although this service is consumed at the same time that it is rendered. It is unproductive when it results in no value. Productive labour is of three kinds: that of the man of science: of the manager of labourers; and that of the workman."

He also combats Smith's doctrine of unproductive labour[1]— "A house, a piece of plate, or massive furniture are very durable products; clothes are less so; vegetables, fruits, still less so. But yet this difference of durability does not in any way affect their quality of products; all of them are wealth in proportion to their value. A farmer in the valley of Montmorency draws annually by the sale of his cherries a sum as real as the proprietor of a portion of the forest of Montmorency draws from cutting wood. It is only the amount of the whole which makes the difference, and if the cherries produced are of more value than the wood, the cherries represent the greater production of wealth. Nevertheless between the instant when these cherries are ripe, and when they must be eaten, there is no great interval; while the wood which serves to form solid buildings, is wealth which lasts a long time. In reference to production, the amount of utility produced can only be determined by the price which men set on it. It is the price which measures the profit which the producer draws from it.

"Since, in regard to production, the durability of a product is of no consequence provided it has value; let us come from products to products, from those which are necessarily consumed a few instants after they are completely created, to those which are necessarily consumed at the very instant of their creation, and we see that a theatrical performance, for instance, is a product which may differ from some fruit of the earth by its duration, because its value cannot last beyond the instant of representation, but which do not differ in the conditions which make them each a product: I mean the property of satisfying one of our wants, of gratifying a taste, of capacity of being valued and sold. The actors meet to offer you the result of their labours and talents: the spectators, on their side, meet to give in exchange for this agreeable product a sum which comes itself from the productions in which you or your parents have taken part. It is an exchange like any other.

[1] *Cours, Part I., ch. 5.*

"Adam Smith and other Economists have denied to immaterial products, the name of products, and to the labour of which they are the fruit the name of productive labour, upon the ground that these products are consumed, at once and have no durability, that they are not susceptible of accumulation and therefore can never increase the capital of the nation.

"The last reason is founded upon an error. Do we accumulate the products which are not preserved, such as the fruits of the earth; which they do not deny to be products?

"In short, is a value the less a product because it is consumed? Are not the greater part of the products of the year destroyed within the year? Are we to say of a man who has lived upon his revenue, that he has no revenue because nothing remains to him?

"Smith's doctrine upon this point does not comprehend the whole doctrine of production. He places in the class of unproductive labourers, and regards as burdens on society a crowd of men who, in truth, furnish a real utility in exchange for their pay. The soldier who holds himself in readiness to repel an invasion of the foreigner, and who repels it at the peril of his life; the administrator who devotes his time and his knowledge to the preservation of the rights of society; the upright judge, the protector of innocence and justice: the professor, who diffuses the sciences painfully acquired: a hundred other professions which comprise persons the most eminent in dignity, the most eligible by their talents and personal character, are not less useful to society, and satisfy the wants which the nation as imperatively requires, as persons do clothing and shelter.

"If any of these services so rendered are not offered to sufficiently extensive competition, if they are paid for above their value, it is an abuse, with which we have no concern here. Undoubtedly there is unproductive labour, but that to which a price is freely given, and which is worth the price put upon it, when it may be refused, is productive labour, however short is the duration of the product.

"According to the writers who refuse to recognize immaterial products, the artificers who produce the fireworks which are to be let off next day in a public garden, are productive labourers, while the actors who prepare the performance of a grand

tragedy are unproductive labourers. Certainly if we could judge by the wealth produced and consumed on these two occasions, otherwise than by the price agreed to be paid for them, we should think that the actors who prepared the theatrical performance, from the talent required, from the duration of the performance, from the long remembrance one preserves of it, from the delicacy and the elevation of the sentiments it gives rise to, we should say that these actors are more productive labourers than the artificers who prepare the squibs, and crackers, and wheels, which vanish in smoke."

We might have expected that Mr. Mill who begins his book by saying that wealth is everything which has power of purchase, which evidently includes services, would have assented to this argument of Say's. But he has reverted very much to Smith's doctrine, though he has extended it somewhat. After giving the general definition of wealth that it is anything which is exchangeable he has, as we have already observed[1], narrowed it down to material products, and he says[2]:—"I shall therefore, in this treatise, when speaking of wealth understand by it only what is called material wealth, and by productive labour only those kinds of exertion which produce utilities embodied in material objects. But in limiting myself to this sense of the word I mean to avail myself of the full extent of that restricted acceptation, and I shall not refuse the appellation productive to labour which yields no material product as its direct result, provided that an increase of material products is its ultimate consequence. Thus labour expended in the acquisition of manufacturing skill I class as productive, not in virtue of the skill itself, but of the manufactured products created by the skill, and to the creation of which the labour of learning the trade is essentially conducive. The labour of officers of government in affording the protection which afforded in some manner or another is indispensable to the prosperity of industry must be classed as productive even of material wealth, because without it material growth in anything like its present abundance could not exist. Such labour may be said to be productive indirectly or mediately, in opposition to the labour of the ploughman and the cotton-spinner, which are productive immediately. They are all alike in this, that they leave the community richer

[1] *Ante, p.* 148. [2] *Book I., ch.* 3, § 3.

in material products than they found it; they increase, or tend to increase material wealth.

"By Unproductive Labour on the contrary, will be understood labour which does not terminate in the creation of material wealth; which, however, largely or successfully practised does not render the community, and the world at large, richer in material products, but poorer by all that is consumed by the labourers while so employed.

"All labour is in the language of Political Economy (?) unproductive which ends in immediate enjoyment, without any increase of the accumulated stock of permanent means of enjoyment. And all labour according to our present definition must be classed as unproductive, which terminates in a permanent benefit, however important, provided that an increase of material products forms no part of that benefit. The labour of saving a friend's life is not productive, unless the friend is a productive labourer, and produces more than he consumes. To a religious person the saving of a soul must appear a far more important service than the saving of a life; but he will not, therefore, call a missionary, or a clergyman, productive labourers, unless they teach, as the South Sea Missionaries have in some cases done, the arts of civilization in addition to the doctrines of their religion. It is, on the contrary, evident that the greater number of missionaries or clergymen a nation maintains, the less it has to expend on other things: while the more it expends judiciously in keeping agriculturists and manufacturers at work, the more it will have for every other purpose. By the former it diminishes, *cæteris paribus*, its stock of material products; by the latter it increases them.

" Unproductive may be as useful as productive labour; it may be more useful even in point of permanent advantage; or its use may consist only in pleasurable sensation, which when gone, leaves no trace: or it may not afford even this, but may be absolute waste. In any case, society or mankind grew no richer by it, but poorer. All material products consumed by any one while he produces nothing, are so much subtracted, for the time, from the material products which society would otherwise have possessed. But though society grows no richer by unproductive labour, the individual may. An unproductive labourer may receive for his labour, from those who derive pleasure or benefit

from it, remuneration which may be to him a considerable source of wealth; but his gain is balanced by their loss; they may have received a full equivalent for their expenditure, but they are so much poorer for it. When a tailor makes a coat and sells it, there is a transfer of the price from the customer to the tailor, and a coat besides, which did not previously exist; but what is gained by an actor is a mere transfer from the spectator's funds to his, leaving no article of wealth for the spectator's indemnification. Thus the community collectively gain nothing by the actor's labour: and it loses, of his receipts, all that portion which he consumes, retaining only that which he lays by. A community, however, may add to its wealth by unproductive labour, at the expense of other communities, as an individual may at the expense of other individuals. The gain of Italian opera singers, German governesses, French ballet dancers, &c. are a source of wealth as far as they go, to their respective countries, if they return thither. The petty states of Greece, especially the ruder and more backward of those states, were nurseries of soldiers, who hired themselves to the princes and satraps of the East to carry on useless and destructive wars, and returned with their savings to pass their declining years in their own country: these were unproductive labourers, and the pay they received, together with the plunder they took was an outlay without return to the countries which furnished it; but though no gain to the world, it was a gain to Greece. At a later period the same country and its colonies supplied the Roman Empire with another class of adventurers, who, under the name of philosophers or rhetoricians, taught to the youth of the higher classes what were esteemed the most valuable accomplishments; these were mainly unproductive labourers, but their ample recompense was a source of wealth to their own country. In none of these cases was there any accession of wealth to the world. The services of the labourers, if useful, were obtained at a sacrifice to the world of a portion of material wealth; if useless, all that these labourers consumed was to the world, waste."

We have given this long extract in order to place before our readers fairly Mr. Mill's views on this important subject, which Malthus justly says goes to the root of the whole science, and as Mr. Mill says, brings us back to the discussion of what wealth is.

For Productive Labour is Labour productive of Wealth. We see that Mr. Mill has somewhat extended the term beyond Smith's view of it; for while Smith only allows those to be productive labourers who are directly employed in the production of material products, Mr. Mill includes those also who are indirectly employed in that way; and this, of course, is a considerably wider circle of persons. He admits "officers of government" to be productive labourers. Hence managers of manufactories, foremen, the army, navy, and police are gathered within the fold of productive labourers: but we are not sure whether the judicial *corps* rank as "officers of Government." We are inclined to think they do; and in that case a barrister who earns an income by serving private parties would be an unproductive labourer, but a judge who earns an income by serving the State is a productive labourer. Authors and editors of newspapers take rank as productive labourers; while actors, singers, opera dancers, clergymen, and others still remain out in the cold as unproductive labourers. Bankers may rank as productive labourers, because the operations of banking do undoubtedly cause a very great increase of material products. The labour of railway and other *employés* engaged in transporting merchandize would be productive, but in transporting passengers would be unproductive. According to the distinction made by Mr. Mill, the labour of instructors teaching artizans and other productive labourers is productive, the labour of those engaged in educating gentlemen, or persons not engaged in business, is unproductive. So the labour of a surgeon or physician, healing a productive labourer is productive; healing a gentleman is unproductive. According to Mr. Mill, the delight the audience receives from witnessing the performance of a Garrick, a Kemble, a Siddons, a Talma, a Macready, a Wigan, a Taglioni, a Fanny Ellsler, a Lablache, a Catalani, a Malibran, a Jenny Lind, a Grisi, a Mario, an Alboni, a Titiens, a Patti, and a Nillson, is the result of unproductive labour, and the world is poorer by their maintenance, while the opulence of the world would be augmented by the labour of as many pastry cooks.

We do not think that such distinctions as these accord with general usage, or with sound practical philosophy: and on this point we entirely agree with Say, whose doctrines are those of common sense and general usage. In general language pro-

ductive labour is labour which is productive of profit. When a person bestows his labour in preparing some material substance, or in rendering some service, which he hopes will be required or demanded by others, what does he expect, and what is his object? It is to *draw forth* some reward in exchange for it. Every one considers his labour as productive, not according to what he offers, but according to what he obtains in return for it. A theatrical company may *produce* several pieces during the season, but whether their labour is *productive* or not entirely depends upon the returns to their treasury. If they play to empty benches their labour is unproductive; if the house is crowded, and their treasury well-filled, their labour is productive.

And it can be easily shewn from Mr. Mill's own words that this is the true meaning, because he says that productive labour is labour productive of wealth. And what is wealth by his own definition? It is *anything* which has power of purchasing; whether therefore a thing is wealth or not purely depends whether anything can be obtained in exchange for it. And of course the more that can be obtained in exchange for it the greater wealth it is, and the more productive. Hence by Mr. Mill's own definition whether anything is productive or not does not depend upon the nature of the thing, but upon the quantity of other things it can draw forth in exchange, or the amount of the returns.

It is true that Mr. Mill has subsequently narrowed down his definition of wealth by several limitations; but we have already shewn[1] that these are quite inconsistent with his general definition, and they must be rejected. A performer receives ten guineas for his performance; a watchmaker receives ten guineas for a watch. The performance and the watch are each equal to ten guineas. Therefore the performance is equal in value to the watch, by the very simple rule that *Things which are equal to the same thing are equal to each other.*

Hence, in accordance with general usage, we shall always use Productive Labour to mean Labour which earns a profit; and Unproductive Labour to mean labour which produces no, or an inadequate, reward. And *anything whatever* which earns a profit is, as Senior says all Economists are agreed, CAPITAL.

[1] *Ante, p.* 148.

36. If the absolute property does not pass to the purchaser but only the right of possession, or of use, for a limited period, after which it reverts to its true owner, the sum of money paid for such a service receives different names, according to the nature of the service or property—

1. If the money be paid for personal services, it is called WAGES, or SALARY, or PAY, or FEES, according to the different species of service.
2. If the money is paid for the use of property, such as is usually classed as *fixed capital*, such as the right to use land, or houses, or running water, as a mill stream, or mines, or fisheries, or a patent, or copyright, it is called RENT.
3. If for the use of property which is more usually floating capital, or personal property, it is called HIRE.
4. If it is for the use of money, it is called INTEREST.

All these names are, therefore, applied when the purchaser buys only the use of a thing for a limited period, and that according to the nature of the object.

37. We have now concluded our survey of the General Conceptions of Economics; the investigation has been long, but we hope not uninteresting. At all events it was absolutely indispensable to raise Economics to the rank of a great Inductive Science. The discussions given here have been brief indeed compared to the fierce controversies which were waged about almost every term in Physical Science. We have now obtained a clear and distinct Conception of the Nature and Limits of the Science itself; or of the body of phenomena whose laws we are about to investigate; and we have had the satisfaction of reconciling the Definitions of the two prevailing schools of Economists, and shewing that they are in reality identical. And we have taken each term in succession, and applying the Laws of Inductive Logic, we have eliminated the accidental and intrusive ideas from each one, and determined that single general idea which fits it to be a fundamental Conception of a great general science. Such is the course which has been followed in every other science, and such is the course which must necessarily be adopted to rear up a solid edifice of science.

38. In case it may be thought that such discussions are superfluous we may quote a few remarks from Dr. Whewell [1]—"Such discussions as those in which we have been engaged, concerning our fundamental Ideas, have been the course by which, historically speaking, those Conceptions which the existing sciences involve have been rendered so clear as to be fit elements of exact knowledge.

"Thus discussions and speculations concerning the import of very abstract and general terms and notions may be, and in reality have been, far from useless and barren. Such discussions arose from the desire of men to impress their opinions on others, but they had the effect of making the opinions much more clear and distinct. In trying to make others understand them, they learnt to understand themselves. Their speculations were begun in twilight, and ended in the full brilliance of day. It was not easily and at once without expenditure of labour and time that men arrived at these notions which now form the elements of our knowledge; on the contrary, we have in the history of science seen how hard, discoverers, and the forerunners of discoverers, have had to struggle with the indistinctness and obscurity of the intellect, before they could advance to the critical point at which truth became clearly visible. And so long as, in this advance, some speculators were more forward than others, there was a natural and inevitable ground of difference of opinion, of argumentation, of wrangling. But the tendency of all such controversy is to diffuse truth and to dispel error. Truth is consistent and can bear the tug of war; Error is incoherent, and falls to pieces in the struggle. True Conceptions can endure the sun, and become clearer as a fuller light is obtained; confused and inconsistent notions vanish like visionary spectres at the break of a brighter day. And thus all the controversies concerning such conceptions as science involves have ever ended in the establishment of the side on which the truth was found.

"The history of Mechanics from the time of Kepler to that of Lagrange, is perhaps the best exemplification of the mode in which the progress of a science depends on such disputes and speculations as give clearness and generality to its elementary conceptions. This, it is to be recollected, is the kind of progress

[1] *Novum Organum Renovatum, ch.* 2. *On the Explication of Conceptions.*

of which we are now speaking; and this is the principal feature in the portion of scientific history which we have mentioned. For almost all that was to be done by reference to observation, was executed by Galileo and his disciples. What remained was the task of generalization and simplification. And this was promoted in no small degree by the various controversies which took place within that period concerning mechanical conceptions:—as, for example, the questions concerning the measure of the Force of Percussion:—the war of the *Vis Viva;* the controversy of the Centre of Oscillation;—of the independence of Statics and Dynamics;—of the principle of Least Action;—of the evidence of the Laws of Motion;—and of the number of Laws really distinct. None of these discussions was without its influence in giving generality and clearness to the mechanical ideas of mathematicians: and therefore though remote from general apprehension, and dealing with very abstract notions, they were of eminent use in the perfecting the Science of Mechanics. Similar controversies concerning fundamental notions, those, for example, which Galileo himself had to maintain, were no less useful in the formation of the Science of Hydrostatics. And the like struggles and conflicts, whether they take the form of controversies between several persons, or only operate in the efforts and fluctuations of the discoverer's mind, are always requisite before the conceptions acquire that clearness which makes them fit to appear in the enunciation of scientific truth."

These remarks of the historian of the Inductive Sciences are an ample vindication of the discussions we have gone through; and it may be as well to conclude this chapter by presenting shortly the results of our investigations:—

SUMMARY of DEFINITIONS.

ECONOMICS, or POLITICAL ECONOMY, or, as it is sometimes called, the SCIENCE OF WEALTH, is the Science which treats of the Laws which govern the relations of Exchangeable Quantities.

WEALTH, or EXCHANGEABLE QUANTITIES, or ECONOMIC QUANTITIES, are EXCHANGEABLE RIGHTS.

Economic Quantities are of three species:—

1. Rights to material or corporeal things already acquired, such as lands, houses, corn, cattle, money, &c., usually called Corporeal or Material Property.
2. Rights to personal services of all sorts, or Labour; usually called Immaterial Property.
3. Rights to things only to be acquired at some future time; usually called Incorporeal Property.

VALUE.—The Value of any Economic Quantity is any other Economic Quantity for which it can be exchanged.

MONEY is any Economic Quantity which a Debtor can by Law compel his Creditor to take in discharge of a debt.

CREDIT is a Right of Action against a person for a sum of money.

AN INSTRUMENT OF CREDIT is the written evidence of a Debt (*See Chap. VII.*).

DEBT is, properly speaking, the Duty to pay a sum of money to another person; but it is also often used in the sense of a right to demand a sum.

CURRENCY is a name applied to Money and Instruments of Credit, because the Property in them passes by delivery.

EXCHANGE is where Economic Quantities of a like nature are interchanged, as goods for goods, when it is often called BARTER: or currency for currency.

SALE, or CIRCULATION, is an exchange of any Economic Quantity for Currency.

CIRCULATING MEDIUM is the medium by which circulation, or sales, are effected—*i. e.*, where goods are exchanged for currency: it includes Money and Credit.

PRICE is the quantity of Money, or Credit, given for any Economic Quantity.

INTEREST is the sum paid for the use of a sum of money at the end of the agreed on period.

RATE OF INTEREST is the sum paid for the use of a sum of money for a given period.

PROFIT is the excess of the price realized above the cost of any Economic Quantity offered for sale.

RATE OF PROFIT is the above excess made in a given time.

DISCOUNT is the difference between the Present Value of a Debt and its amount.

RATE OF DISCOUNT is the above difference with regard to a certain time.

A SECURITY FOR MONEY is the Right to demand a sum of money from a certain person.

A CONVERTIBLE SECURITY is any property which may be readily sold.

CAPITAL is any Economic Quantity used for the purpose of Profit.

FIXED CAPITAL is that which remains in the possession of the owner while being used, and whose value is replaced by instalments in the price of the products.

FLOATING CAPITAL is that which he parts with, and whose value is restored to him in one operation, in the price of the product.

PRODUCE; PRODUCER; PRODUCTION.

To PRODUCE is to offer any Economic Quantity for sale or exchange.

The PRODUCER is the seller.

PRODUCTION is the offering any Economic Quantity for sale or exchange.

CONSUME; CONSUMER; CONSUMPTION.

To CONSUME is to purchase any Economic Quantity.

The CONSUMER is the buyer, or customer.

CONSUMPTION.—The purchase of any Economic Quantity.

SUPPLY is the amount of any Economic Quantity offered for sale or exchange.

DEMAND is the Desire and the Power to purchase any Economic Quantity.

PRODUCTIVE LABOUR is Labour which produces a Profit, or draws forth something in exchange for it.

UNPRODUCTIVE LABOUR is Labour which produces no profit, or an inadequate profit.

CHAPTER V.

THE THEORY OF VALUE.

PRELIMINARY REMARKS.

SECTION I. DEFINITION OF VALUE—ERROR OF THE EXPRESSION INTRINSIC VALUE — DEPRECIATION AND DIMINUTION IN VALUE — IMPOSSIBILITY OF A STANDARD OF VALUE.

SECTION II. ON THE ORIGIN, SOURCE, OR CAUSE OF VALUE.

SECTION III. TO INVESTIGATE A GENERAL LAW OF VALUE: OR THE GENERAL EQUATION OF ECONOMICS.

We have seen in the preceding chapter that writers in ancient times and all the principal Economists since Adam Smith have recognized the fact that there are three distinct species of Exchangeable Quantities, proceeding from three different sources, the Earth, the Human Mind, and the Human Will. It is also a matter of positive knowledge that there are no more than these three species: consequently, having applied the principles of Inductive Logic as laid down by Bacon, to generalize our fundamental Conceptions, so as to grasp all these three species, we are sure that our Conceptions cannot be overthrown or modified, because it is not possible that there should be any Economic Quantity which is not of the form of Money, Labour, or Credit.

The Physiocrates, who only admitted the material products of the earth to be wealth, said that all Products were ultimately exchanged against Products; a formula which was very incautiously adopted by J. B. Say. Beccaria, who would have attained a very high repute as an Economist if his lectures delivered in 1769 had not been suppressed until 1804, says[1]:— "In every age there has been an exchange of products for products reciprocally superfluous and necessary, of services for products, and of services for services. Thus Beccaria only treated of two species of Exchangeable Quantities, and of three

[1] *Elementi di Economia pubblica; Prolusione.*

kinds of exchange. But we have shewn that there are *three* species of Exchangeable Quantities and Six different kinds of Exchange, which constitute the domain of the pure science of Economics, or Political Economy in its most modern definition. We have defined the Value of any Economic Quantity to be any other Economic Quantity for which it can be exchanged. Hence to investigate the Theory of Value is to investigate the laws which govern the relations of Exchangeable or Economic Quantities.

The complete Theory of Value comprises the following:—

1. *The Definition of Value.*
2. *The Origin, Source, or Cause of Value.*
3. *The General Law of Value: or the General Equation of Economics.*

On each of these points there has been the most extraordinary conflict of opinion among writers. We shall, therefore, have to investigate each branch of the subject separately, as we have already done the general conceptions of the science. We shall have to generalize each of these branches by ascertaining and eliminating the accidental and intrusive ideas, so as to include the three different species of quantities; and we shall then have to investigate a general Law of Value, or a General Equation of Economics which must be applicable to all the six species of exchange, equally and indifferently: by the same Baconian Laws of Inductive Logic which have been held universally supreme in all other Physical Sciences.

SECTION I.

DEFINITION OF VALUE—ERROR OF THE EXPRESSION INTRINSIC VALUE—DEPRECIATION AND DIMINUTION OF VALUE—IMPOSSIBILITY OF A STANDARD OF VALUE.

1. "As Value," says Whately,[1] "is the only relation with which Political Economy is conversant, we might expect all Economists to be agreed as to its meaning. There is no subject as to which they are less agreed."

Every one who has read much of Economical writers must recognize the truth of the assertion; hence we must establish the true and original meaning of Value, and afterwards shew the confusion which has been introduced into the subject.

Value originally means esteem, or estimation, as we speak of a highly valued friend. But such value is not an Economic phenomenon; to be so it must be manifested in some tangible form.

We have seen in the preceding chapter, § 19, that Aristotle says that Value, ἀξία, is a relation to external goods.

Now ἀξία is derived from ἄγω, one of whose meanings is *to weigh*, or *be of the weight of;* so Demosthenes, speaking of some golden goblets, says[2]—"ἄγουσα ἑκάστη μνᾶν," *each one weighing a mina.* And again, speaking of the sword of Mardonius, he says[3]—"ὃς ἦγε τριακοσίους δαρεικούς," *which weighed three hundred darics.* Hence ἀξία meant equality, weight for weight.

So Homer, *Iliad* xxiii., 885, says—

κὰδ δὲ λέβητ' ἄπυρον, βοὸς ἄξιον, ἀνθεμόεντα
θῆκ' ἐς ἀγῶνα φέρων.

And he offered too, as a prize, a new caldron ornamented with flowers, worth an ox.

Herodotus, iv., 196, describes a curious way in which the Carthaginians traded with the Moors. They brought out their merchandize and placed it on the beach, and lit a fire and got on board their ships. The natives seeing the smoke came down to the beach and placed a quantity of gold near the merchan-

[1] *Appendix to Logic. Ambiguous terms.*

[2] *Against Androtion*, 617,21. [3] *Against Timocrates*, 741,7.

dize, and then retired to a distance. The Carthaginians then disembarked and came to see it. If the gold seemed to them of the value (ἄξιος) of the merchandize, they took it in exchange and went away. But if it was not sufficient in value they went on board their ships again. The natives then came back and added some more gold to their heap until they were satisfied. And neither party cheated the other. For neither did the Carthaginians touch the gold till they thought it equal in value (ἀπισώθη τῇ αξίῃ) to the merchandize, neither did the natives touch the merchandize until the Carthaginians took away the gold.

So we have seen that in Roman Law it was said that a thing was of the value of what it would sell for. Thus anciently the value of a thing was always something external to itself, something it was equal to, bulk for bulk, and no ancient writer who had clear ideas would ever have thought of speaking of Intrinsic, or Internal, Value.

So the Physiocrates considered Value to be a new quality which products acquired when men lived in society—"Products acquire then in the social state, which arises from the communication of men among each other, a new quality. This quality is *Value*, which makes products become *Wealth*, and there is properly speaking no superfluity, because the excess becomes the means of obtaining what is wanted.

"Value consists in the relation of exchange which takes place between such and such a product; between such a quantity of one product and such a quantity of another.

"Price is the expression of value: it is not separate in exchange; each thing is reciprocally the price of the merchandize: in a sale, the price is in money."[1]

And this is the true idea of value. Thus, let A and B be any two Economic Quantities which are exchanged at any moment, then we may say:—

A *valet* B

or, A is of the value of B

or, A = B.

Then B is the value of A in terms of B, and A is the value of B in terms of A.

[1] *Le Trosne: De l'intérêt social, ch. I., § 4.*

Hence it is clear that value is a Ratio, or an Equation. It is like distance. It necessarily requires two objects. The value of a thing is always something external to itself. It is absolutely impossible to predicate that any quantity has value, without at the same time implying that it can be exchanged for something; and, of course, everything it can be exchanged for is its Value in that commodity. It is impossible to say that any quantity has value, without at the same time stating Value in what—whether bread, or shoes, or cloth, or money, or anything. So it is impossible to say that any town has distance, unless we state the place it is distant from. We can no more say that a quantity is worth, than we can say that London is distant. And as any place is of different distances from other places, so any quantity has as many Values as other quantities it will exchange for.

Now, suppose B as above is ten guineas: then A may be either of the three species of exchangeable quantities. It may be a material product like a watch: or it may be an immaterial product, such as so much instruction in science or literature, or it may be so much amusement—as so much acting, or any other service: or it may be an incorporeal product—as a Debt, under the form of a Bank Note, or a Bill of Exchange; or so much Public Stock, or any other species of incorporeal property. Each of these species of property is of the value of ten guineas: and therefore it manifestly follows that each of them must be equal to each other: for *Things which are equal to the same thing are equal to one another.*

But B may be either of the three species of exchangeable quantities as well as A. Therefore any Economic Quantity may have Value in terms of any of the others.

It is from failing to keep a firm, clear, and distinct grasp of the fundamental conception that the Value of an Economic Quantity must be some other quantity for which it can be exchanged, that so much confusion has been created in the subjects of Wealth, Value, Productive Labour, and Economics generally. Aristotle says that Wealth is *anything* whose value may be measured in money, and from this wide and general definition the author of the Eryxias irrefragably proved that if a person can gain a living by giving instruction in science, etc., then that instruction is wealth, just for the very same reason that gold and silver are so—because they can purchase the necessaries

of life. So the Roman Lawyers, who also made the principle of wealth to reside solely in exchangeability, classed Rights under the title of wealth, because naked abstract rights may be bought and sold like anything else.

The value of the goods in the merchants' and traders' warehouses is the money in the pockets of their customers. The value of the money in the pockets of the public is the various products and services it can purchase. The value of a Professor's lectures is the fees paid to him by his students. The Value of the Lawyer's, Physician's, Surgeon's talents is the income he can earn. Hence Malthus's reason for excluding immaterial products from Economics, because they cannot be catalogued and valued, besides being quite irrelevant to the science of Economics, is at once overthrown, because we have only to enumerate all the Lawyers, Physicians, Surgeons, Civil Engineers, Architects, and men of all sorts who exercise a profession, and ascertain their income, and the value of their labour is as easily catalogued and determined as that of any material products.

The Value of an Incorporeal Right, or Promise, is the thing which may be demanded or promised.

The Value of a £5 note is five sovereigns. The Value of a Postage Stamp is the carriage of a letter. The Value of a Promise, or Pledge, to cut a man's hair is the cutting of the hair. The Value of a Railway Ticket is the journey. The Value of an order to see the Zoological Gardens is being admitted to see them. The Value of an admission to the play is seeing the play.

Suppose the price of getting one's hair cut is a shilling: suppose I want my hair cut: what difference does it make to me whether I have a shilling in my pocket, or the pledge of the hair dresser to cut it? Is it not clear that in this case the shilling and the promise are of exactly the same value to me?

Suppose I want a loaf of bread which costs a shilling: what difference does it make to me whether I have a shilling in my pocket, or a Promise from a baker to give me the bread? Are not the shilling and the Promise of exactly the same value to me in this case?

Suppose I want to see the Zoo: what difference does it make to me whether I have a shilling in my pocket, or an order for admission? Are not the shilling and the order of exactly the same Value to me in this case?

In short, suppose I want any product or service at all, what difference does it make to me whether I have the money in my pocket to purchase it, or a Promise from some one to render me the product or the service? Are not the money and the promise of exactly the same Value to me in each separate case?

Each separate tradesman only, of course, promises to render some particular product; and as this product is not demandable from any one but the person who has given the pledge, it has, of course, *particular* Value.

Now what is Money? It is nothing but the generalized Right, or Power, to demand whichever of these products or services we may require at any time. Is it not clear, therefore, that money is a General Right, while each of these Pledges is a Particular Right?

Is it not clear, therefore, that each of these separate Rights is of the same *nature* as money, only inferior in degree? And that they are Economic Quantities, or Wealth, for the very same reason that money is? And that money is nothing but a stored up or accumulated general power or Right of demanding all products and services? Is it not clear, that if a man had his pocket full of promises or pledges by solvent persons to render him all the products and services he wanted, he would be just as wealthy as if he had so much money? Hence we see the perfect justice of the Roman Law—"Under the title of Wealth, or Money, Rights are included."

These Rights, then, being clearly shewn to have Value, and be Wealth, like any material products, they may be bought, sold, and exchanged like any material products. A Right to demand a loaf of bread may be exchanged against a Right to have one's hair cut. One of the Ionian oil bills mentioned before [1] may be exchanged for a pledge, or promise to pay so much tea, or any other product.

So a Right to demand a sum of money to be paid three months hence, may be exchanged against a Right to demand money at once. And all these Rights are Economic Quantities, or Wealth, as much as any material products. They are the most colossal species of property in this country, and the subject of the most gigantic commerce, whose mechanism is fully exhibited in the next chapter but one.

[1] *Ante, chap. IV.*, § 20.

As Value is the Ratio in which two Economic Quantities A and B will exchange, it is clear that the value of A in terms of B increases or decreases according to the greater or less quantity of B that A can purchase: and the value of B in terms of A increases or decreases according to the greater or less quantity of A that B can purchase. It is also clear that if from any cause whatever the Value, or the Ratio, between these quantities has changed, the value of *both* must have changed. It is manifestly as absurd to say that the value of one quantity has changed, while that of the other has remained the same, as it would be to say that a railway train had increased its distance from the station; while the station remained at the same distance from the train. Moreover it would be as absurd to speak of a quantity changing its own value, or keeping its own value fixed, without stating the article with respect to which its value had changed, or remained fixed, as it would be to say that an object had changed or preserved its own distance, or its own ratio, without saying distance from what, or ratio to what.

Hence it is quite clear that nothing can have fixed or invariable value unless everything else is fixed and invariable in value as well, because though the value of a quantity may remain the same with regard to any number of things, yet if its value has changed with respect to any other things whatever, the value of that thing has changed.

And as the value of anything is solely anything else it can be exchanged for, it is manifest that if it can be exchanged for nothing, it has no value. No matter what qualities it may possess, if no one else wants it, and will give nothing for it, it has no more value for its owner than if he were in the centre of the Desert of Sahara. Many persons have almost a difficulty in believing that money can have no value; but Smith himself says, that if a guinea could not be exchanged for anything it would be of no more value than a bill upon a bankrupt. So Say says[1] things can only be valued by an exchange. This is strictly in accordance with the doctrine of all ancient writers and of the Physiocrates.

All this is simple enough, and is only the necessary consequence of value being a ratio and requiring two objects. But while

[1] *Cours, Part I., ch.* 1.

Economists admit that the value of a thing is something external to itself, they scarcely ever adhere to that conception, and its necessary consequences, but they constantly consider value to be some absolute inherent quality, appertaining to the thing itself, without apparently the least idea that these are two different conceptions, and the whole subject has been thrown into inconceivable confusion by their sometimes treating value as a Quality and sometimes as a Ratio.

There is only one further thing that need be noticed here: Value is the ratio in which any Economic Quantity will exchange with any other Quantity: Price is the value of a Quantity in Money or Credit only. Now if Money or Credit be excessively abundant, the prices of all other things will rise, but they will still preserve their relative values among themselves. For if a loaf of bread and a pound of meat each cost sixpence, and if, in consequence of an excessive abundance of money or credit, they each rise to a shilling, the pound of meat is still of the value of a loaf of bread. Hence there may be a general rise, or a general fall, of prices.

But there can be no such thing as a general rise, or a general fall, of values. Everything can no more rise or fall with respect to everything else than, as Mr. Mill says, a dozen runners can each outrun all the rest, or a hundred trees can all overtop one another; or than, every donkey can come in last in a donkey race. To suppose that all things could rise relatively to each other would be to realize Pat's idea of society, where every man is as good as his neighbour, and a great deal better too.

On the Error of the Expression INTRINSIC VALUE.

2. We have now to call attention to a phrase which has been the cause of an enormous amount of confusion in Economics. Say very justly remarks on the difficulty of divesting the mind of the influence of common language in this subject. Nothing has been more mischievous than the influence of the phrase we are going to notice, and to exterminate it is the first step in the improvement of the science—especially for the due comprehension of the subject of Credit.

All ancient writers kept their minds clearly fixed on the thing

which anything could be exchanged for as its value, or something external to itself, and we have not found in them any trace of such a confusion of ideas as the expression *Intrinsic Value*. But their writings on the subject seem to have been totally forgotten. In modern times when men began to consider the subject of wealth, gold and silver were long held to be the only species of wealth, because they outlasted everything else, which wasted away or was destroyed, while they remained. When men began to see the absurdity of holding specie to be the only wealth, they looked to some quality of the thing itself, as constituting a thing wealth, and then they began to speak of *Intrinsic Value*. We have not been able to discover where or when this expression arose; but so long ago as 1696 an able writer, Barbon, pointed out the confusion which had arisen from mistaking the absolute qualities of a thing for the thing it would exchange for. He says[1]— "There is nothing that troubles this controversy more than for want of distinguishing between *value* and *virtue*.

"Value is only the price of things; that can never be certain, because it must be there at all times, and in all places, of the same value; *therefore nothing can have an* INTRINSIC VALUE.

"But things have an *intrinsic virtue* in themselves, which in all places have the same virtue: as the loadstone to attract iron, and the several qualities that belong to herbs and drugs, some purgative, some diuretical, &c. But these things, though they may have great *virtue*, may be of small *value*, or no price, according to the place where they are plenty or scarce, as the red nettle, though it be of excellent *virtue* to stop bleeding, yet here it is a weed of no *value* from its plenty. And so are spices and drugs in their own native soil of no value, but as common shrubs and weeds, but with us of great value, and yet in both places of the same excellent intrinsic virtue."

Again—"For things have no value in themselves; it is opinion and fashion brings them into use and gives them a value."

Barbon thus puts his finger on the very thing which is the curse and the bane of Economics to this very day, the expression *Intrinsic Value*, which is confounding an *intrinsic quality*

[1] *A discourse concerning coining the new money lighter, in answer to Mr. Lock's considerations about raising the value of money, p.* 6.

with an *external relation.* It is this very phrase which in recent times has done so much to obscure and confuse the Theory of Credit.

The most distinguished writer who, before the Physiocrates, wrote against the Mercantile System, was Boisguillebert, the morning star of modern Economic Science. In the various writings, *Le détail de la France,* published in 1697, the *Factum de la France,* 1707, and others, he advocates all those doctrines which Turgot was only able to carry out three-quarters of a century later. Boisguillebert says[1]—"Wealth from the beginning of the world, by the destination of nature, and the order of the Creator, is nothing else than an ample enjoyment of the wants of life: as they are simply reduced to food and clothing necessary to defend men from the rigours of the climate, it almost all consists in two kinds of occupation, namely ploughing the earth and pasturage." And again, showing the absurdity of considering gold and silver as wealth, when they could not be exchanged for the necessaries of life, such as food and clothing, he says[2] that these are the only things which should be considered as wealth.

And after this time the usual definition of wealth among writers who rebelled against the Mercantile System was the "annual produce of land and labour." Thus Cantillon says[3]:—"The earth is the source or matter from whence all riches are produced: the maintenance, convenience, and superfluities of life are, properly speaking, riches, labour the first, and industry the second, means of obtaining them." So Turgot, Verri, Beccaria, and, indeed, all Economists at that time make wealth to consist of the necessary, useful, and agreeable things obtained from the earth by labour. This definition, which looked to things as being wealth from their useful qualities, naturally led writers to speak of *Intrinsic Value.* The principle of exchangeability was also included by these writers as appertaining to wealth, but only as a secondary and subordinate one, not as the sole and exclusive one, as it was by ancient writers.

Economists then confined their attention solely to things of value, the produce of labour, quite oblivious of the fact that

[1] *Factum de la France, ch. iv.*

[2] *Dissertation sur la nature des richesses. Considerations générales.*

[3] *Analysis of Trade, p.* 1.

there are multitudes of things of value which are not the result of labour at all. Then they began to consider that things would exchange in proportion to the labour employed in producing them. Thus the value of a thing was considered to depend on the quantity of labour employed to produce it. Thus the quantity of labour embodied as it were in the thing came to be counted as its value, and value thus came to be called *Intrinsic*, and many of the most eminent Economists consider value to be some inherent quality of a thing conferred by labour. This unhappy phrase, *Intrinsic Value*, meets us at every turn in Economics, and yet the slightest reflection will shew that to define Value to be something *external*, and then to be constantly speaking of *Intrinsic Value*, are utterly self-contradictory and inconsistent ideas.

Thus over and over again it is repeated in Economical works that money has *Intrinsic Value*, but that a bank note, or bill of exchange, is only the *representative* of value.

Money no doubt is the produce of labour, but as Smith observes, if it would exchange for nothing it would have no value. So that after all, Smith comes to exchangeability as the principle of value. So also Say says that the value of money only consists in the things it will buy. How then can its value be *Intrinsic?* How can anything have *Intrinsic* Value, unless it has the things it will exchange for inside itself? Money has *Intrinsic* Value! Has a piece of money got the merchandize, and all the other things it will purchase inside itself? Money will exchange for anything—corn, houses, horses, carriages, books, &c., and each of these is the Value of the money with respect to that commodity. But which of these is its *Intrinsic* Value?

It is quite clear that money has not *Intrinsic*, but *General*, Value, because it is *generally* exchangeable throughout the country. But place it among a race of savages and where would its value be?

Persons throughout a country will always be ready to give things in exchange for the money of the country, hence money has *General* and *Permanent* Value, but manifestly not *Intrinsic* Value.

All Economists admit that a bank note payable on demand is of the value of money. And why is it so? Simply because

it is exchangeable for money. A bill of exchange on a solvent merchant has value, simply because at a certain time it will be exchanged for money. Hence it is clear that bank notes and bills of exchange have value for precisely the same reason that money has, and no other, viz., that they are *exchangeable for something else.* When money can be exchanged it has value; when it cannot be exchanged it has no value: when a bill, or note, can be exchanged it has value; when it cannot be exchanged it has no value.

Hence we see that the Value of Money and Credit of all kinds is essentially of the same nature, though there may be different degrees of it. A piece of credit is an article of merchandize and an exchangeable commodity just as much as money or any other goods.

The expression Intrinsic Value is so common that persons are apt to overlook its incongruity of idea; but if we use words of similar import whose use has not been so corrupted, the absurdity will be at once apparent. Thus who ever heard of an Intrinsic Distance, or an Intrinsic Ratio? The absurdity of these phrases is apparent at once; but they are not more absurd than Intrinsic Value. To say that money because it is material, and the produce of land and labour, has Intrinsic Value, and that a Bill or Note is only the *Representative* of value, is as absurd as to say that a wooden yard measure is *intrinsic* distance, and the space between two points one yard apart, is the *representative* of distance.

The extraordinary inconsistencies into which Smith and Ricardo have fallen are more fully exhibited in the next section but one, on a *Standard of Value*, but we will give here an example of the confusion of idea into which able writers are betrayed. Senior says[1]—"We have already stated that we use the word VALUE in its popular acceptation, as signifying that *quality in anything which fits it to be given and received in exchange*, or in other words to be lent or sold, hired or purchased.

"So defined, Value denotes a *relation* reciprocally existing between two objects!"

Now the quality of a melon which fits it to be sold is its agreeable flavour; its flavour is, according to Senior, its value;

[1] *Political Economy*, p. 13.

and so defined, he says, it means it costs 5s.! That is, he defines the quality of a thing to be its price!

But Economics has nothing to do with the useful or agreeable qualities of things, but only with their external relations to other things. The sole quality of things which an Economist, quà Economist, is to investigate is their exchangeability; and it must always be remembered that Economics is a pure science of Ratios.

On the distinction between Depreciation *and* Diminution in Value.

3. We must now observe the difference between two expressions, which, though often used indiscriminately, are essentially distinct, viz., *Diminution in Value* and *Depreciation.* An *alteration in value* of any commodity means that the quantity of it which was considered as an equivalent for a certain amount of some other commodity with which it is compared, has undergone a change. *Depreciation* means that it is not really of the value it professes to be. *Alteration in value* of a commodity is always used in reference to some other commodity with which it is compared; *Depreciation,* in reference to itself. Thus, if at any given time an ounce of gold will exchange for fifteen ounces of silver, and owing to any great and sudden increase of the quantity of silver, while the quantity of gold remains the same, one ounce of gold becomes able to purchase twenty ounces of silver, then silver is said to have sustained a *Diminution of Value* with respect to gold; or if, while silver remained the same, gold became very scarce, so that one ounce of gold would purchase twenty ounces of silver, then gold would be said to have *risen in value* with respect to silver. But if a bank note, which professes to be of the value of five sovereigns, will only purchase four sovereigns, it is *depreciated;* or if a guinea, which professes to contain a certain amount of fixed weight of pure gold, does not contain that amount, it is *depreciated.* The expression *Diminution in Value* is applicable both to commodities and money; the word *Depreciation* is more properly restricted to currency; when an analogous change takes place in commodities, it is usually called *deterioration.*

These distinctions are very necessary to be observed in all discussions regarding the value of coins which retain the same names during a long series of ages. The pound of money in the days of William the Conqueror really meant a pound weight of silver bullion; and silver was the only money. Since then silver has greatly increased in quantity, and other things are used as money, which have tended very greatly to diminish its value. It is said, though of course all such statements are extremely difficult to verify, that silver has fallen to a twelfth of its value in those times. Not only has the value of the metal greatly diminished, but the coinage is greatly deteriorated. By various diminutions effected by successive sovereigns, the shilling now is only the 66th part of a pound weight, whereas it was formerly the 20th part. Hence it is said that a shilling will only command the 36th part of what it formerly would. Though, as great changes have taken place in everything else as well, it would be difficult to prove this.

These causes affecting the value of coins which retain their names through long periods, may act in the same, or opposite, directions. It is quite easy to imagine that a coin, though greatly deteriorated, or diminished from its original weight, may, in consequence of the increased value of the material of which it is composed, be able to purchase as much as it would have done originally. It is alleged sometimes that this happened at Rome. The first coinage of Rome was copper, and this metal was found in great abundance for some time after the foundation of the city. The first measure of value was the *as* which was a pound weight of copper. The *as* was subsequently reduced to the twelfth part of its weight, and some writers say, that in consequence of the great scarcity of the metal, it had increased so much in value, that the deteriorated coinage would purchase as much as the full pound would originally. This may be so, or not, but it in no way affects the argument. It might, very possibly have been so.

These considerations greatly affect the public in the matter of public debts. The State agrees at a particular time to pay a fixed quantity of bullion, either for ever, or for a long period, to the public creditors. Now, even supposing all other things to remain the same, the value of the money may vary very greatly during long periods, either from the increased scarcity, or the increased

abundance, of the metal; and either the State or the creditors may be grievously affected by these changes.

In recent times, many able Economists have expected that the value of gold would be violently affected by the great discoveries in California and Australia. Some countries have taken such alarm at this as to abolish gold as the legal measure of value, and some writers have proposed that the weight of the sovereign should be increased in consequence. Even if the consequences expected did follow, which is extremely doubtful, it is not very likely that this would be done. However, this is not the place to discuss this important question.

A Standard of Value *is* Impossible.

4. The unfortunate confusion of ideas between the Value of a quantity being any other quantity a thing will exchange for, and the quantity of labour embodied in obtaining the quantity itself, has led not only to the mischievous expression, Intrinsic Value, the source of endless confusion, but also to the search for something which reflection would have shown to be impossible, viz., an *Invariable Standard of Value.*

The great difficulty in dealing with Economical writers and their opinions is, that to collect their opinions, it is often necessary to place before the reader long passages, and to examine closely the structure of nearly every sentence, to mark the changes and inconsistencies of thought which take place. This is insufferably wearisome to the reader, and therefore we must refer to the chapter in Smith on the subject, for a full considera tion of his views. It is B. i., *c.* v. But we must shortly state his doctrine.

The first doctrine he lays down is that the value of any commodity is equal to the quantity of labour which it enables him to command or purchase. Hence, if l denote labour,

$$A = l,\ 2l,\ 3l,\ 4l \ldots .$$

He then says, in the next paragraph, that that is the same thing as saying that it is equal to the produce of labour it enables him to purchase; or, denoting produce by p,

$$A = p,\ 2p,\ 3p,\ 4p \ldots .$$

And then in the next paragraph he says that the value of any

thing is more frequently estimated in money than either in labour or commodities; or, denoting money by m,

$$A=m,\ 2m,\ 3m,\ 4m\ \ldots\ .$$

Now, although it has justly been pointed out that these modes of estimating the value of a quantity are by no means identical, we observe that in this passage, Smith defines the value of a thing to be something *external* to itself—it is the thing which any thing can be exchanged for. Hence it is manifest that the value of A must vary directly, as l, p, or m. The more l, p, or m that can be got for A, the more valuable is A; the less of l, p, or m that can be got for A, the less valuable is A. It is also perfectly clear, that if any change whatever takes place in the exchangeable relations between A and these quantities, the value of A has changed.

Hence Smith admits that Value, like distance, requires two objects. If any change takes place in the position of either of these, the distance between them has changed, no matter in which the change takes place. So if the exchangeable relation between two quantities changes, their Value has changed, no matter in which the change takes place. Hence it is clear that there can be no such thing as *Invariable Value*. Nothing whatever can by any possibility have an invariable value, unless its exchangeable relation with everything else is fixed. Hence we can at once see that, by the very nature of things, there can be no such thing as an invariable standard of value, by which to measure the variations in value of other things, because, by the very nature of things, the very condition of anything being invariable in value is that nothing else shall vary in value: and consequently the very condition of there being an invariable standard is, that there shall be no variations to measure.

Nevertheless a very large body of Economists have set out upon this wild goose chase—this search for an invariable standard, which it is utterly contrary to the nature of things should exist at all. Directly after the passages we have referred to, Smith commences the search for that single thing which is to be the invariable standard of value. He says that gold and silver will not do because they vary in their value, —sometimes they can purchase more and sometimes less of labour and other commodities. Then he says:—

"But as a measure of quantity, such as the natural foot, fathom, or handful, which is continually varying in its own quantity, can never be an accurate measure of the quantity of other things, so a commodity, *which is itself continually varying in its own value*, can never be an accurate measure of the value of other commodities. *Equal quantities of labour at all times and places may be said to be of equal value to the labourer.* In his ordinary state of health, strength, and spirits, in the ordinary degree of his skill and dexterity, he must always lay down the same portion of his ease, his liberty, and his happiness. *The price which he pays must always be the same, whatever may be the quantity of goods which he receives in return for it.* Of these, indeed, it may sometimes purchase a greater and sometimes a smaller quantity, *but it is their value which varies, not that of the labour which purchases them.* At all times and places, that is dear which it is difficult to come at, or which it costs much labour to acquire, and that cheap which is to be had easily, or with very little labour. *Labour alone, therefore, never varying in its own value, is alone the ultimate and real standard by which the value of all commodities can at all times and places be estimated and compared.* It is their real price; money is their nominal price only.

"*But though equal quantities of labour are always of equal value to the labourer*, yet to the person who employs him they appear sometimes to be greater, and sometimes of smaller value.

* * * * *

"*Labour, therefore, it appears evidently, is the only universal, as well as the only accurate measure of value, or the only standard by which we can compare the value of different commodities at all times and at all places.*"

Now the utter confusion of ideas in these passages is manifest. A foot, or a fathom, is an absolute quantity, and of course may increase or decrease by itself; but Value, by Smith's own definition, is a *ratio*, and therefore we might just as well say that, because a foot which is varying its own length cannot be an accurate measure of the length of other things, therefore a quantity which is always varying its own *ratio* cannot be an accurate measure of the *ratio* of other things. The utter confusion of ideas as to the whole nature of the thing is manifest. We may measure a tree with a yard, because they are each of

them single quantities, but it is an impossibility that a *single quantity can measure a ratio.* It is a manifest impossibility to say

$$a : b :: x$$

It is manifestly absurd to say 4 is to 5, as 8, without saying, as 8 is to what; just as it is absurd to say that a horse gallops at the *rate* of 20 miles, without saying in what time.

But Smith tells us that "equal quantities of labour are always of equal value to the labourer." What! if a man performs a certain quantity of labour, and gets £1,000 for it, is his labour of the same value to him as if he gets five shillings?

The incongruity of ideas in this chapter of Smith is palpable. He first of all defines the Value of A to be the quantity of things it will purchase, and therefore, of course, varying directly as that quantity, and then he suddenly changes the conception of Value into the quantity of labour bestowed in producing A; and says that the Value of A is invariable, so long as it is produced by the same quantity of labour; and that its Value is the same whatever quantity of things it will purchase!

The term Value has been used with such diversity and inconsistency of meaning by writers, that it will aid much in shewing the confusion that runs through the whole of Smith's ideas to translate them into mechanical language, thus:—

"As a measure of quantity, such as a foot, which is always varying its own length, can never be an accurate measure of the length of other things, so an object which is always varying its own *distance* can never be an accurate measure of the *distance* of other objects. But the sun is always at the same distance. And though the earth is sometimes nearer to the sun, and sometimes farther off from it, the sun is always at the same distance. And though the earth is at different distances from the sun, it is the distance of the earth which has varied, and not that of the sun; and the sun alone, never varying its own distance, is the ultimate and real standard by which the distances of all things can at all times and places be estimated and compared."

Such is a fair translation into mechanical language, merely substituting "distance" for "value," of Smith's ideas. No wonder, says Francis Horner, "we have been under the necessity of suspending our progress in the perusal of the *Wealth of Nations*, on account of the insurmountable difficulties, obscurity,

and embarrassment in which the reasonings of the fifth chapter are involved."

But after saying, in the last-mentioned passages, that a thing produced by the same quantity of labour is always of the same value, no matter what it may exchange for, he says, speaking of money, in the passage we have already quoted, if it could be exchanged for nothing, it would be of no more value than the most useless piece of paper. So that, after beginning with exchangeability, and then adopting quantity of labour, he comes back again to exchangeability as the measure of Value, quite unconscious that these are different conceptions. And this confusion of idea runs through the whole of Smith's work: one half of it is based upon labour being the foundation of value, and the other half upon exchangeability.

Exactly the same confusion runs through the whole of Ricardo. He begins by saying[1]—"The value of a commodity, *or the quantity of any other commodity for which it will exchange*, depends on the relative quantity of labour which is necessary for its production."

So again[2]—"In the early stages of society, the exchangeable value of these commodities, or the rule which determines *how much of one shall be given in exchange for another*."

A little further on[3] he calls the quantity of labour bestowed on a commodity, "under many circumstances an invariable standard, indicating correctly the variations of other things."

Again he says[4]—"the stockings would inevitably fall in value, and consequently command less of other things. They would fall because a less quantity of labour was necessary to their production, and would therefore *exchange for a smaller quantity* of these things."

Ricardo then starts on the search of the *Invariable Standard of Value*,[5] which should itself be subject to none of the fluctuations to which other commodities are exposed. He says that it is impossible to be possessed of such a measure, because there is no commodity which is not subject to require more or less labour for its production.

Afterwards he says[6]—"If equal quantities of labour, with equal quantities of fixed capital, could at all times obtain, from

[1] *Principles*, *p.* 1. [2] *Ibid.*, *p.* 3. [3] *Ibid.*, *p.* 5.
[4] *Ibid.*, *p.* 19. [5] *Ibid.*, *ch.* i., *p.* 6. [6] *Ibid.*, *ch.* iii.

that mine which paid no rent, equal quantities of gold, gold would be as nearly an invariable measure of value, as we could in the nature of things possess. The quantity would indeed enlarge with the demand, but *its value would be invariable, and it would be eminently well calculated to measure the varying value of all other things.*"

In a subsequent part of his work, he says[1]—"The labour of a million of men in manufactures will always produce the same value."—"That commodity is alone invariable, which at all times requires the same sacrifice of toil and labour to produce it." Which is just as rational as to say, that a Railway Station, because it does not move, is always at the same distance from the trains which are flying to, and away from, it, though they are at different distances from it! That the distance from B to A is always changing, but the distance from A to B is invariable! And after beginning by defining, and several times repeating that, the value of a thing is the other things it will exchange for, he ends by saying—"I cannot agree with M. Say in estimating the value of a commodity, by the abundance of other commodities for which it will exchange!" The extraordinary consequences which Ricardo deduces from his doctrine will be more fully exhibited in the next section.[2]

Ricardo, therefore, begins by defining the value of a thing to be something external to it, and then he ends by describing it to mean the cost of production, or quantity of labour, bestowed in obtaining it. The very first day that Jeremy Bentham read the book he wrote to Ricardo to tell him that it was all founded on a confusion between *Cost* and *Value.*

Mr. Mill has shewn the impossibility of there being an invariable standard of value,[3] but he has not brought out with sufficient distinctness the simple reason that Value is a *Ratio*, and a single quantity cannot be the measure of a ratio.

In the passages we have quoted, Smith and Ricardo have both

[1] *Principles, ch.* xx.

[2] A disciple of Ricardo, who is supposed to have carried his doctrines to an extreme, says, "There is no necessary connection at all, or of any kind, direct or inverse, between the quantity commanded, and the value commanding." And a little further on, "I presume that in your use, and in everybody's use of the word Value, a high value ought to purchase a high value, and that it will be very absurd if it should not. *But, as to purchasing a great quantity, that condition is surely not included in any man's idea of Value!*"—*The Templar's Dialogues by De Quincey.*

[3] *Book* iii., *ch.* 15.

assumed that labour is an invariable standard of value. Other things, it is true, have been proposed, such as corn; but we need not encumber ourselves with their consideration, because our object is to shew that such a thing is, by the very nature of things, absolutely impossible.

One of the first writers to point out the impossibility of such a standard was Mr. Samuel Bailey, in his admirable "*Critical Dissertation on the Nature, Measures, and Causes of Value*," a work which has greatly contributed to found Economic Science.

If we had a British yard and any foreign measures before us, we could at once perceive the difference between them, and if we were told the measurements of any foreign buildings, however remote in age or country, we could by a very simple calculation, reduce them to the standard of British measurement, and compare them in size with our own buildings. So with our measures of weight; if we were told that in ancient days people could carry a ton as easily as men can now carry a hundred-weight, we should at once have a standard by which we could judge of the relative strength of men of old and the men of the present day.

In a certain popular way money is termed the measure of value. And so it is in exchanges which are effected at the same time and place. If we were told that a quarter of corn was worth 60s., and that a sheep was also worth 60s., at a certain time and place, we should know that they were then and there equal in value. That is, they would both exchange for the same quantity of gold or silver.

But such matters are not the result of simple perception by the senses. If we had a quantity of gold or silver placed beside a number of other things, no human sense could tell us what their relative values were. And the most violent changes in value might take place without our being able to have the slightest perception of such a thing.

Moreover it would be equally absurd to suppose that we could ascertain the different values of different quantities of gold obtained in different ages and countries. If a quantity of gold coins minted in the reign of Elizabeth, a similar quantity minted in China, and an equal quantity minted in the reign of Victoria, were placed side by side, what human sense could discern the difference in value between them? And yet that is what those

Economists require, who want an invariable standard of value. They want something by which they can at once decide whether gold is of more value in 1400, or in 1800, in England or in China, without any reference to anything else.

The least reflection will show that this is an impossibility. The only test of value is an exchange, and unless we can effect an exchange there can be no value. How can we exchange an ounce of gold in the year 1572, for an ounce of gold in the year 1872? Mr. Bailey well says, p. 72, "Value is a relation between contemporary commodities, because such only admit of being exchanged for each other; and if we compare the value of a commodity at one time with its value at another, it is only a comparison of the relation in which it stood at these different times to some other commodity. It is not a comparison of some intrinsic independent quality at one period, with the same quality at another period, but a comparison of ratios, or a comparison of the relative quantities in which commodities exchanged for each other at two different epochs. If a commodity A in the year 100 was worth 2 B, and in 1800 was worth 4 B, we should say that A had doubled its value to B. But this, which is the only kind of comparison we could institute, would not give us any relation between A in 100 and A in 1800: it would be simply a comparison of the relation between A and B in each of these years.

"It is impossible for a direct relation of Value to exist between A in 100 and A in 1800, just as it is impossible for the relation of distance to exist between the sun at the former period and the sun at the latter."

It is obvious that all we can do by a measure of Value is to ascertain in a convenient way the exchangeable relations existing between any quantities at any given time. And by a comparison of prices at different epochs we can observe the differences which have occurred in the exchangeable relations of these quantities between the different times. And this, though far from what is required by those writers, is all that we can have.

The fundamental objection then to there being a Standard of Value is simply this, that value is always a ratio, and a single quantity cannot be the measure of a ratio. And yet it is by no means uncommon to hear able men rise up at learned associations

and demand that the Government should institute an inquiry to ascertain and affix an invariable Standard of Value, in the same way as they have bestowed great care and pains to fix the standard of length, and capacity, and weight. All they can do is to maintain a fixed weight and purity in the current coin of the realm; but they can no more control its variations in Value than they can regulate the motions of the stars by Act of Parliament.

SECTION II.

On the ORIGIN, SOURCE, OR CAUSE *of* VALUE.

5. We have seen that there are three species of Economic Quantities, each containing many varieties, which have value. We have decided that *the* Value of a Quantity is any other Quantity it can be exchanged for. We now come to the second branch of our inquiry—What is the CAUSE, or SOURCE, of VALUE, and whence does it originate?

Now when we are to search for the cause, or source, of value, it may be as well to understand what it is we are searching for. There is a very great number of things of several different natures which all have value: we must therefore manifestly search for some *single* Cause which is common to them all, and ascertain what that single cause is, by genuine Induction.—"But the induction which is to be available for the discovery and demonstration of sciences and arts must analyse nature by proper rejections and exclusions, and then after a sufficient number of negatives come to a conclusion on the affirmative instances."[1] —"Now what the sciences stand in need of is a form of induction which shall analyse experience, and take it to pieces, and by a due process of exclusion and rejection lead to an inevitable conclusion."[2]

Now the first step in this process of induction is to make a complete collection of all the different kinds of quantities, of whatever nature they may be, which have value. "For whosoever is acquainted with *Forms*, embraces the unity of nature in substances the most unlike. From the discovery of Forms, therefore, results truth in Theory and freedom in Practice."[3]

So Bacon earnestly inculcates as the foundation of all true science a careful collection of all kinds of instances in which the given nature is found[4]—"The investigation of forms proceeds thus: a nature being given, we must first of all have a muster, or presentation, before the understanding of all known instances which agree in the same nature, *though in substances the most unlike.* And such collection must be made in the manner of a history, without premature speculation." Bacon

[1] *Nov. Org., Book* i., *Aph.* 105.
[2] *Distributio Operis.*
[3] *Nov. Org.,, Book* ii., *Aph.* 3.
[4] *Nov. Org., Bk.* ii., *Aph.* 11.

then exemplifies his method by an investigation into the Form of Heat: and he gives tables of the divers instances agreeing in the Nature of Heat: also where it is absent: and where it appears in different degrees.

"The work[1] and office of these three tables I call the Presentation of Instances to the Understanding, which presentation having been made, Induction itself must be set to work; for the problem is upon a review of the instances, all and each, to find such a nature as is always present, or absent with the given nature, and always increases or decreases with it, and which is, as I have said, a particular case of a more general nature."—"We must make[2] therefore a complete solution and separation of nature, not indeed by fire, but by the mind, which is a kind of divine fire. The first work therefore of true induction (as far as regards the discovery of Forms) is the rejection or exclusion of the several natures which are not found in some instance when the given nature is present, or are found in some instance where the given nature is absent, or are found to increase in some instance where the given nature decreases, or to decrease when the given nature increases. Then indeed after the rejection and exclusion has been duly made, there will remain at the bottom, all light opinions vanishing into smoke, a Form affirmative, solid and true, and well defined."

An indispensible part of Induction is the rejection of erroneous Forms—"I must now give an example[3] of the Exclusion or Rejection of natures which by the Tables of Presentation are found not to belong to the Form [of Heat]; observing in the meantime not only each table suffices for the rejection of any nature; but even any one of the particular instances contained in any of the tables. For it is manifest from what has been said that *any one contradictory instance* overthrows a conjecture as to the Form"—"In the process of Exclusion are laid the foundations of true Induction, which however is not completed till it arrives at an affirmative. Nor is the exclusive part itself at all complete, nor indeed can it possibly be so at first. For exclusion is evidently the rejection of simple natures; and if we do not yet possess sound and true notions of simple natures, how can the process of exclusion be made accurate?"

[1] *Nov. Org.*, *Bk.* ii., *Aph.* 15. [2] *Nov. Org.*, *Bk.* ii., *Aph.* 16.
[3] *Nov. Org.*, *Book* ii., *Aph.* 18.

6. Bacon has exemplified his process of Induction by investigating the Form of Heat. Our present task is to investigate the FORM OF VALUE.

We must begin, following the example of the mighty Master, by making a complete collection of instances of Value. We have already seen that there are three different species of Quantities, each of them containing many varieties, all having Value. We must now enumerate all the different kinds of Quantities which have Value.

There are—

I. CORPOREAL, OR MATERIAL, PROPERTY.—Under this species are comprised the following different varieties—Land: Trees: Cattle: Flocks and herds of all sorts: Corn and other fruits of the earth of all sorts: Houses: Furniture: Clothes: Money: Fish: Minerals, such as Coal, Iron, Copper, Marble, &c.: Precious stones, such as Diamonds, Rubies, Emeralds, &c.: Pearls: Manufactured articles of all sorts, as watches, &c.

II. IMMATERIAL PROPERTY.—Under this species is comprised Labour of all sorts—agricultural; artizans'; professional: scientific: literary, &c.

III. INCORPOREAL PROPERTY. — Under this species are comprised the following varieties:—Credit: The Public Funds: Debts of all sorts: Copyright: Patents: Shares in Commercial Companies: The Goodwill of a business: The Practice of a profession: Tolls: Ferries: Ground Rents: and Annuities of all sorts.

We have now to investigate the Form of Value of all these different Quantities. We must first of all, by a due and systematic course of rejections and exclusions, eliminate all intrusive and accidental ideas which may sometimes accompany Value; and after completing this process of exclusion, we must end by an Affirmative, and discover that single general cause which is common to all these different Quantities; which being present, Value is present; which when it increases, Value increases: which when it decreases, Value decreases: and which being absent, Value is absent.

7. In modern times when men began to speculate on this subject, the first and most popular doctrine was that LABOUR is the CAUSE of Value.

Thus Locke, after shewing that the foundation of the right of appropriating portions of the earth and its products by private persons originated in the labour they bestowed on them, says,[1]— "Nor is it so strange as perhaps before consideration it might appear, that the Property of Labour should be able to overbalance the community of land: for it is labour indeed that put the difference of value on everything; and let any one consider what the difference is between an acre of land planted with tobacco or sugar, sown with wheat or barley, and an acre of the same land lying in common without any husbandry upon it, and he will find that the improvement of labour makes the far greater part of the value. I think it will be but a very modest computation to say, that of the products of the earth useful to the life of man, nine-tenths are the effects of labour; nay, if we will rightly estimate things as they come to our use, and cast up the several expenses about them, what in them is purely owing to nature, and what to labour, we shall find that in most of them ninety-nine hundredths are wholly to be put on the account of labour.

"There cannot be a clearer demonstration of anything, than several nations of the Americans are of this, who are rich in land, and poor in all the comforts of life; whom nature having furnished as liberally as any other people, with the materials of plenty, *i. e.*, a fruitful soil, apt to produce in abundance what might serve for food, raiment, and delight: yet for want of improving it by labour, have not one hundredth part of the conveniences we enjoy; and a king of a large and fruitful territory there feeds, lodges, and is clad worse than a day labourer in England.

"To make this a little clearer, let us but trace some of the ordinary provisions of life through their several progresses, before they come to our use, and see how much of their value they receive from human industry. Bread, wine, and cloth, are things of daily use, and great plenty; yet, notwithstanding, acorns, water, and leaves, or skins, must be our bread, drink, and clothing, did not labour furnish us with these more useful commodities; for whatever bread is more than acorns, wine than water, and cloth or silk than leaves, skins, or moss, that is wholly owing to labour and industry; the one of these being the food

[1] *Essay on Civil Government.*

and raiment which unassisted nature furnishes us with; the other, provisions which our industry and pains prepares for us; which, how much they exceed the other in value, when any one hath computed, he will then see how much labour makes the far greater part of the value of things we enjoy in this world; and the ground which produces the materials is scarce to be reckoned in, as any or at most, but a very small part of it; so little that even amongst us, land that is left wholly to nature, that hath no improvement of pasturage, tillage, or planting, is called, as indeed it is, waste; and we shall find the benefit of it amount to little more than nothing.

"An acre of land that bears here twenty bushels of wheat, and another in America which, with the same husbandry, would do the like, are without doubt of the same natural intrinsic value; but yet the benefit mankind receives from the one in a year is worth £5, and from the other possibly not worth a penny, if all the profit an Indian received from it were to be valued and sold here: at least I may truly say not one thousandth. It is labour, then, which puts the greatest part of the value upon land, without which it would scarcely be worth anything: it is to that we owe the greatest part of all its useful products; for all that the straw, bran, bread, of that acre of wheat is more worth than the product of as good land which lies waste, is all the effect of labour; for it is not barely the ploughman's pains, the reaper's and the thresher's toils, and the baker's sweat, is to be counted into the bread we eat; the labour of those who broke the oxen, who digged and wrought the iron and stones, who felled and framed the timber employed about the plough, mill, oven, or any other utensils, which are a vast number, requisite to this corn, from its being seed to be sewn to its being made bread, must all be charged on the account of labour, and received as an effect of that; nature and the earth furnished only the almost worthless materials as in themselves. It would be a strange catalogue of things that industry provided and made use of about every loaf of bread before it came into our use, if we could trace them: iron, wood, leather, bark, timber, stone, bricks, coals, lime, cloth, dyeing, drugs, pitch, tar, masts, ropes, and all the materials made use of in the ship that brought any of the commodities used by any of the workmen to any part of the work: all which it would be almost impossible, at least too long, to reckon up."

We have given this passage at length because it is probably the most elaborate Economical analysis of price of its time: and the essay it is taken from is not the best known of Locke's works. The doctrine that all wealth is the produce of land and labour became very common among the early thinkers on Economics. We have seen that Smith constantly repeats the phrase, although we have shewn his inconsistencies on the subject.

Ricardo perceiving the inconsistency of Smith's fundamental doctrines of Value, finally rejected exchangeability as the test of Value, and adopted Labour as the Cause, or Form, of Value.—"In speaking,[1] however, of labour as being the foundation of all value." He also says that if a commodity were always produced by exactly the same quantity of labour, it would be invariable in value.

McCulloch also maintained that Labour is the cause of all value[2]—"Nature is not niggard nor parsimonious. Her rude products, powers, and capacities are all offered gratuitously to man. She neither demands nor receives an equivalent for her favours. An object which may be appropriated, or adapted, to our use without any voluntary labour on our part may be of the highest utility, but as it is the free gift of nature, it is quite *impossible it can have the smallest value.*" Also—"In its natural state[3] matter is very rarely possessed of any immediate or direct utility, and is always destitute of value. It is only through the labour expended on its appropriation, and in fitting and preparing it for being used, that matter requires exchangeable value, and becomes wealth."

Mr. Carey, the well known American Economist, has also adopted the doctrine that *Labour is the cause of all value*, to its fullest extent. He says[4]—*It may be said that labour is not invariably a cause of value*" and he quotes Senior, who says—"The fact that that circumstance (labour) is not essential to value, will be demonstrated if we can suppose a case in which value could exist without it. If, while carelessly lounging along the seashore, I were to pick up a pearl would it have no value? Mr. McCulloch would answer that the value of the pearl was the

[1] *Principles of Political Economy, ch.* i., 1, 2.
[2] *Introduction to Wealth of Nations, p.* 32. [3] *Ibid., p.* 43.
[4] *Principles of Political Economy, ch.* 1.

result of my appropriative industry in stooping to pick it up." To this Mr. Carey answers—"Pearls may be found by those who do not seek them, and meteoric iron may be gift to those who little anticipate its reception, while others may seek for pearls, or dig for iron, without profitable results. These are accidents which do not in the slightest degree militate against the assertion that all value is the result of labour. Nine hundred and ninety-nine out of every one thousand parts of those annually created are so, and the exceptions are too slight to be deserving of consideration. They are just sufficiently numerous to prove the rule!!"

In Chap. 9, Mr. Carey gives the results of his investigations, the first two of which are (1). That all value is exchangeable. (2). That Labour is the sole cause of value.

We need not quote from any more writers, as we think that it is well known that it is a very wide spread doctrine among Economical writers that Labour is the sole cause of Value, and is essential to Wealth.

We have now to apply the principles of the Baconian Induction, to investigate the doctrine that Labour is the Form, or Cause, or Source, of Value.

8. Now we may lay down this Lemma:—*That if Labour be the sole cause of Value, then whatsoever thing Labour has been bestowed upon must have Value.*

For if there be two things produced with the same amount of Labour, and the one has Value and the other not; then there must be some other cause of Value besides Labour, which is contrary to the hypothesis.

We will now examine some of the necessary consequences of the doctrine that *Labour is the cause of all Value:*—

I.—*All Variations in Value must be due to Variations in Labour.*

This doctrine, however, is contrary to all experience: because there are many material things which have Value, upon which no Labour was ever bestowed, as for example:—

1.—The space of ground upon which a city stands is in no way the result of Labour. Land in the heart of London has

often been sold at a rate exceeding £1,000,000 an acre, perfectly exclusive of any buildings upon it. When was any Labour ever bestowed upon it? Again, as we recede from the centre, the Value of Land rapidly diminishes. At Charing Cross it may be worth £100,000 an acre; by the time we reach Kensington, it has fallen to £10,000 an acre. Moreover land in the same locality is of very different values. A frontage in a main thoroughfare like Regent Street, Fleet Street, Cheapside, or Cornhill, is of far more Value than an equal space of ground in a back street.

Again, as the tide of fashion, population, and wealth sets towards a locality, the ground in it rises rapidly in value; whereas when a neighbourhood is deserted by fashion and wealth, the ground rapidly diminishes in value.

Now, how can these Variations in Value be due to different quantities of Labour, when, as we have seen, these spaces of ground are not in any way whatever the result of Labour at all?

The space of ground in the centre of London, Paris, Berlin, Vienna, &c., has enormous value. There are places now desolate and lonely which were once the sites of great cities. When the chariots and the horsemen were pouring forth in countless multitudes from the hundred-gated Thebes, we may affirm that the ground in the city must have had very great value. So with Memphis, Nineveh, Babylon and innumerable others. Where is their value now? Yet the ground remains exactly as it was. When the future Belzoni or Layard comes from New Zealand to sketch the ruins of St. Paul's from a broken arch of London Bridge, will ground near the site of what was once the Royal Exchange sell for £70 the square yard?

When a fair is held in a country town, persons pay a good rent for leave to erect booths and tents upon the common. At other times they would not pay anything; therefore the space of ground has Value at one time, and not at another. How is the Value of that space due to Labour?

2. The doctrine that no natural product has Value unless labour has been bestowed upon it is contrary to all experience. The proprietor of a coal mine, or a stone quarry, demands and receives a price for the coal, or the marble, or the building stone, as it exists in the mine, or the quarry, before a human being has touched it. Does any one suppose that the proprietor

of a coal mine would let any one take away the coals for nothing? Does any one suppose that the proprietors of the marble quarries of Carrara allow any one to hew out the marble for nothing? If a person finds a diamond or a lump of gold by chance, will it sell for nothing before it is picked up? Is it, as McCulloch says, the Labour of picking it up that gives Value to the diamond or the gold?

Take also the case of timber trees. In the Midland counties of England there are many oak trees which would sell for £60 or £100 as they stand on the ground. They were perhaps self-sown. No human being perhaps ever bestowed so much labour upon them as to plant the acorn from which they grew. How is the value of such an oak tree due to labour? Near these oak trees there may perhaps be growing other trees, beeches, elms, ashes, of the same size; but they will sell for very different prices to the oaks. Are these variations in value due to different quantities of labour?

Next take the case of cattle, herds, and flocks of all sorts. These increase and multiply of themselves, by the agency of nature. How is their value the result of human labour?

Hence we see that there are abundance of material things which have value, upon which no Labour was ever bestowed, and consequently their value cannot be the result of Labour.

In the island of Unst, the most northernly of the Shetlands, there is a "quarry of chromate of iron which was discovered above twenty years ago (1825). The quarry is of great depth the ore lying imbedded, apparently in abundance, in veins through the rock of which the hill is composed. The working of this mine gives employment to upwards of fifty men and boys each summer, and many hundreds of tons of the metal are annually exported. It is used chiefly as a pigment, producing a fine bright yellow paint: and as none is elsewhere found in Britain, it is a source of considerable revenue to the proprietors." [1]

Now if the whole value of this chromate of iron was due to the labour of the miners, that is, if it sold for no more than their wages, how could the proprietor realize any revenue from it? Hence it is quite clear that the proprietor was enabled to ask a price for it over and above the labour expended upon it; and this value cannot be due to Labour.

[1] *Chambers's Miscellany. Tract No 75. A Visit to Shetland.*

Some little time a large whale was stranded in the Frith of Forth. It sold as it lay on the beach for £70. Now it was the free gift of nature, no human being touched it. How then could its value be due to Labour?

We read in an interesting work by Mr. Buckland[1]—"When examining the cast-off skins at the Zoological Gardens we observed some white-looking substance in a box. This is the dejecta of the snakes. It is a perfectly white substance, looking very like plaster of Paris, and is composed of nearly pure uric acid. It is bought by a doctor (I imagine a chemist) for the high price of nine shillings a-pound." Now, were the *excreta* of the snakes the product of Human Labour?

II. *If Labour be the sole Cause of Value, then all things produced by the same amount of Labour must be of equal Value.*

But this doctrine is contrary to all experience. For if it were true, a diamond and the rubbish it is found in, must be of the same value! So a pearl and its shell should be of equal value. If a sportsman were to shoot a pheasant with one barrel, and a crow with the other, they ought to have the same value. If a fisherman were to catch a salmon and a dogfish with the equal quantities of labour, would they have the same value? and similar cases might be multiplied to any extent. Now here are different products obtained by exactly the same amount of labour, and of very manifestly different values. Hence it is clear that labour cannot be the sole cause of value.

III.—*If Labour be the Cause of Value, the Value must be proportional to the Labour.*

But this doctrine is also contrary to the most manifest experience. Suppose that by good luck a gold digger finds a nugget of gold lying on the surface of the ground; another digger works perhaps for many months and finds one exactly similar. Then, according to this doctrine, the latter nugget ought to be immensely more valuable than the other. Or suppose that some gold were brought from some diggings near the market, and that an exactly equal amount were obtained by enormous labour among mountains many hundreds of miles off. The latter is of

[1] *Curiosities of Natural History*, p. 161.

course produced, *i. e.*, placed in the market, at an enormously greater amount of labour and cost than the other. But would it be more valuable? The least experience shews that it would not be so, but that things of exactly the same quality would be exactly the same value at the same time in the same market.

IV.—Again, *if Labour be the sole Cause of Value, a thing once produced by Labour must always have Value, and the same Value.*

But this is notoriously contrary to experience; because it is notorious that a thing may have value in one place and not in another; and at one time and not at another; as the author of the *Eryxias* very clearly shewed.

Take a bag of sovereigns among the Papuans; where would their value be? Genovesi quotes from an account of the Jesuits, how they bought provisions from the savages of Polavra,[1] and they wished to pay them with money: the barbarians laughed at them. They also held manufactures in no account. The thing which was most prized by them, and therefore the only one valued, was iron, which was useful for all their purposes of life. A Professor of Greek and Latin, or Mathematics, may find his acquirements of great value to him in the Universities, but of what value would they be to him in the Hebrides? A great lawyer finds his knowledge and abilities of great value to him in London, but of what value would they be to him in Timbuctoo? Nay, suppose a man labours very hard in London to acquire a profession such as Law; and no one employs him, where is the value of his Labour? If a man had all the medical knowledge in the world, from Hippocrates and Galen to Copland, and no one was ill, what value would it be of to him?

In fact, to say that Labour is the *Cause* of Value, is to say that an isolated thing can have Value: whereas almost every Economist has acknowledged that Value is relative, and can only occur in society. Now if a man labours ever so hard, if nobody requires his products, they have no value, and he is no better off in the midst of London, than if he were in the midst of the Sahara.

Moreover, if Labour be the sole cause of Value, then if a thing be once produced by means of any quantity of labour, its

[1] *Lezioni di Economia Civile, part* ii., *c.* 1, § 7.

value could never vary; which is Ricardo's express doctrine. But this is contrary to all experience. For things after they have been produced, and all labour is ended upon them, constantly vary from hour to hour, from day to day, and from year to year. Thus pictures by some masters constantly rise in Value; and pictures by others frequently diminish in value, long after the masters who painted them are dead and gone. Now how could this be, if Labour be the Cause of Value?

Nothing can shew more clearly that Labour is not the Cause of Value than the extravagant lengths to which Ricardo has pushed the theory, which however is only the consistent logical result of his doctrine. He says [1]—"The labour of a million of men in manufactures will always produce the same Value." It is obvious that unless the manufactures sell for something they have no value at all. And it is contrary to common sense to say that whether the manufactures sell for £100 or £10,000 they have exactly the same value.

In the reign of George III., there was a very widespread fashion to wear steel shoe buckles: this manufacture employed a very large number of persons. All of a sudden these buckles went out of fashion; the demand for them totally ceased; and the people employed in making them were thrown into the greatest distress. But according to Ricardo, the labour of the men who made the buckles was exactly of the same Value when there was a very large Demand for them, and when there was no Demand for them at all! Not very long ago the fashion of ladies wearing straw bonnets went out, and the manufacturers of them at Luton, Dunstable, &c., were thrown into great distress. But according to Ricardo their labour was of the same value when there was a demand for straw bonnets, and when there was none!

At the end of the same chapter Ricardo propounds doctrines, more contrary still, if possible, to universal experience and common sense, though the necessary logical consequence of his doctrine. He says—"In contradiction to the opinion of Adam Smith, M. Say in the fourth chapter speaks of the value which is given to commodities by natural agents, such as the sun, the air, the pressure of the atmosphere, &c., which are sometimes substituted for the labour of man and sometimes concur with

[1] *Principles of Political Economy, ch.* xx.

him in producing. But these natural agents, though they add greatly to *value in use*, NEVER ADD EXCHANGEABLE VALUE to a commodity! And they (natural agents) are serviceable to us by increasing the abundance of productions, by making men richer, by adding to value in use; but as they perform their work gratuitously, as nothing is paid for the use of the air, of heat, and of water, the assistance which they afford us *adds nothing to Value in Exchange!!*"

Now when logical reasoning from certain premises leads to results which are notoriously false, and contrary to experience and fact, it is perfectly certain that those premises must be erroneous. Nothing more is required than the grotesque absurdity of the consequences which Ricardo arrives at, which are the logical results of the doctrine that Labour is the sole cause of Value, to shew the utter fallacy of the doctrine.

If a man plants an acorn, the full grown oak tree, according to Ricardo, ought to be of no more value than the acorn; because human labour ends with the planting of the acorn, the rest is the agency of Nature.

According to this doctrine, cattle and fowls ought to have no value at all, because no human labour ever made an animal, or ever laid an egg.

According to Ricardo's doctrine the value of the harvest reaped should be no greater than the cost of the seed corn and the ploughing and labouring the land; because there human labour ends: the rest is the agency of nature.

According to Ricardo's doctrine the fertilizing showers in spring nourishing and expanding the young crops add nothing to the value of the harvest: therefore, also by the same doctrine, the want of a due amount of showers, or an absolute drought, would not detract from its value.

Every one of common sense knows that the bright and hot weather at the end of July or the beginning of August, adds hundreds of thousands of pounds every day to the value of the crops; according to Ricardo the bright sun adds nothing to the value of the corn.

We might shew the absurd consequences of this doctrine at much greater length, but every reader who reflects upon the broad statement of Ricardo that the agency of nature adds nothing to the value of things, must at once perceive its gross

fallacy, and also the complete fallacy of the dogma that *Labour is the sole cause of Value.*

We cannot, however, refrain from adding one more instance to give this doctrine its *coup de grâce.* Can any rational being doubt that the glorious vintages of France, Germany, and Italy, owe much of the qualities which make them desired, and so valuable, to the bright sun of these districts? Now Adam Smith says that wine might be grown in Scotland at thirty times the expense it is grown in France; according to Ricardo it ought to sell at thirty times the price of French wine.

9. It is perfectly easy to perceive the fallacy that pervades the eloquent and elaborate analysis of Locke, which has been followed by so many writers. It is perfectly true that labour has been bestowed on the land; and it is also true that it has great value; but it is quite easy to see that the *Labour* is not the CAUSE of the *Value;* for suppose that the people of England were, like the Phocæans and Teians of old to emigrate in a body, where would the value of the land be? If there be a country in the world whose value might most plausibly be said to be due to labour, that country is Holland. "By nature a wide morass, in which oozy islands and savage forests were interspersed among lagoons and shallows; a district lying partly below the level of the ocean at its higher tides, subject to constant overflow from the rivers, and to frequent and terrible inundations by the sea"[1]—there are probably not ten square miles of its surface which do not owe their existence as a habitable abode for men, to the incredible labour of its hardy people. And it was one of the richest spots on the face of the globe. Once when it seemed that the very last hour of the Republic had come; surrounded and overwhelmed by the forces of Louis XIV., it was seriously contemplated to collect the whole navy of the Republic, and to transport the whole people of the state to their Oriental possessions. Where then would have been the value of the land if this desperate resolve had been carried into effect?

Now, if Labour be the *Cause* of the value of the land, it is clear that if a sufficient number of persons were to go and bestow an equal amount of labour in bringing the same quantity

[1] *Motley. Rise of the Dutch Republic.*

of land in the centre of Australia into an equally high state of cultivation, it ought to be of equal value with the land in England or Holland; a result which is evidently absurd.

Labourers and artisans build houses in London, Paris, Berlin, Vienna, &c. The houses are great wealth in these cities; but if the same labourers were to go out and build houses in all respects similar in the middle of Australia, would they be of the same, or of any, value?

10. Hence we see that even of material things there are many upon which no labour was ever bestowed, and which yet have value; and even if those which have had labour bestowed on them, Labour is not the FORM, or CAUSE, of their value.

Now, with respect to the second species of Economic Quantities, namely, Immaterial Property, which comprehends all species of Labour, as above detailed, one simple remark is sufficient—*If Labour is the sole Cause of Value, what is the Cause of the value of Labour?*

11. With respect to the third species of Economic Quanities, namely Incorporeal Property, there are some kinds which are associated with labour, such as Copyrights, Patents, the Goodwill of a business, or the Practice of a Profession; but the same remark applies to them as to the material objects with which labour is associated: that it cannot be the *Cause* of their Value. If a person bestows an enormous quantity of labour in publishing a work, the law of course may give him the Copyright, but if no one will buy the work, where is its Value? So also of Patents: much labour may have been bestowed in perfecting the invention, but if no one buys the machine where is its Value?

But there are vast amounts of Incorporeal Property, as there of Corporeal Property, which have value, which are not associated with labour at all. Thus Credit of all sorts is not in any way associated with labour. If a solvent merchant accept a Bill of Exchange, or a solvent Bank issue notes, this commercial paper has Value, and is the subject of commerce, as all Economists admit, but where is the Labour bestowed upon it? Now the quantity of Credit in this country exceeds all imagination. There is no doubt whatever that the quantity of private and

public Credit in this country not only exceeds any other single kind of Property whatever, but is not far off from being equal to all other kinds of property put together.

Hence we see—

1. That there are vast quantities of Property, both Corporeal and Incorporeal, which have Value, upon which no Labour was ever bestowed.

2. That quantities, both Corporeal and Incorporeal, may be produced by Labour which have no Value.

3. That the same quantity of Labour may produce products, one of which has Value, and the other no Value.

4. That quantities produced by varying quantities of Labour have the same Value.

5. That things produced by Labour may have Value in some places and not in other places; and at some times and not at other times.

6. That things produced by less Labour may have greater Value than things produced by more Labour.

From these indisputable propositions, the result of practical experience, the undeniable inference is that Labour is not in any whatever the FORM, or the CAUSE, of Value; or even necessary to Value; and, in fact, in this commercial country the enormously greater proportion of Valuable Property is not the result of Labour at all.

It only happens that in a great many cases labour is associated with Value, or is the ACCIDENT of Value—and how it is so will be a matter for subsequent inquiry.

12. Now by the laws of Inductive Philosophy if we could find a single case of Value which was not the result of Labour, that single instance would alone be sufficient to overthrow the doctrine that Labour is the sole Cause of Value. But instead of one instance, we have adduced multitudes of cases. We have shewn that the greater portion of valuable property is not even associated with labour at all.

In short, there never was any doctrine in science which has received such a crushing and overwhelming overthrow, as that Labour is the *Cause* of Value: and hence we see that that system of Economics which founds its ideas of Wealth and Value on Labour is utterly fallacious.

13. The pertinacity with which some writers maintain that all value is due to Labour, contrary to the evidence of the most glaring facts, is a strong and striking instance of Bacon's Aphorism[1]—"The human understanding when it has once adopted an opinion (either as being the received opinion or as being agreeable to itself) draws all things else to support and agree with it. And though there be a greater number and weight of instances to be found on the other side, yet these it either neglects and despises, or else by some distinction sets aside and rejects; in order that by this great and pernicious predetermination the authority of its former conclusions may remain inviolate . . . But with far more subtlety does this mischief insinuate itself into philosophy and the sciences: in which the first conclusion colours and brings into conformity with itself all that come after, though far sounder and better. Besides independently of that delight and vanity which I have described, it is the peculiar and perpetual error of the human intellect to be more moved and excited by affirmations than by negatives; whereas it ought properly to hold itself indifferently disposed towards both alike. Indeed in the establishment of any true axiom the negative instance is the more forcible of the two."

14. In considering the preceding table or enumeration of Quantities which have Value we observe that the whole class of Immaterial Quantities and the whole class of Incorporeal Quantities have Value, but not Materiality. Hence we see evidently that Materiality is not necessary to Value, it is only accidentally associated with it in some cases.

15. So also we observe that some things which have Value may last for ever, like the land, statues, gems, &c.: other things may last a very long time, like pictures, houses, &c.; others have a constantly diminishing degree of permanence, or durability, others have only a very short degree of permanence, such as food of various sorts: while others, such as theatrical performances, and labour of all sorts perish in the actual production. Now among Bacon's Prerogative Instances, he expressly mentions *Instances of Ultimity or Limit*, and says,[2] "nor should extremes

[1] *Nov. Org.*, *Book* i., *Aph.* 46. [2] *Nov. Org.*, *Book* ii., *Aph.* 34.

in the lowest degree be less noticed than extremes in the highest." This is the doctrine of the the *Law of Continuity* which says that which is true up to the limit is true at the limit; so things of Value are to be included in which the durability is 0, or which perish in the very act of production. Hence we see that Permanence, or Durability, is not necessary to Value, it is only the accident of Value.

16. J. B. Say saw that the doctrine that all Value arises from labour is untenable, and he placed the Origin, or Source, of Value in Utility; although he has involved himself in many self-contradictions, as we shall have to shew hereafter.

The doctrine that UTILITY is the Source, Origin, or Cause of Value, is in some respects more specious than that Labour is the cause of Value: because there are many useful things, like land, trees, cattle, &c., which are not the result of Labour at all. But yet reflection will shew that it is liable to the same fatal objections as that Labour is the cause of value. For it makes Value some quality of the thing itself, absolute and inherent, as Say says[1]—"Sans que leur utilité, leur valeur intrinsèque soit plus grande."—"Sa valeur reelle fondée sur son utilité," and therefore of course its value cannot vary so long as the quality remains the same.

Many of the arguments which prove that Labour is not the Form, or the Cause, of Value are obviously applicable to the doctrine that Utility is the Form of Value.

The doctrine that Utility is the cause of Value is more specious in this respect: that for a thing to be useful, it must be useful to some person. But then there is this fatal defect in the doctrine, that while the qualities of the thing itself remain exactly the same, the same thing may be useful at some times and not at others; and in some places and not in others; and to some persons and not to others. Thus some people smoke, others cannot endure tobacco; among a nation of smokers a cargo of tobacco would have value; among a nation of non-smokers it would have no value. Among a nation of wine drinkers the rich vintages of France and Germany have great value; but among Mahommedans who obeyed the precepts of their prophet, or a nation of teetotallers, these

[1] *Traité, pp.* 58, 59.

products would have no value. In the present state of society, cannon and military accoutrements and ironclads have great value; but if the whole world were to adopt the principles of the Society of Friends, these engines of war would have no value. A tureen full of train oil would be a great delicacy and highly prized among the Esquimaux, but it would probable not have the same value at the Lord Mayor's dinner. So many nations esteem as delicacies what other nations loathe and abhor.

Again many things may be highly useful and remain the same, and have a great value, when some better thing of the same nature comes out, and diminishes or destroys the value of the first things. Thus our sailing line of battle ships were considered the very *acmè* of perfection. But steam came in, and in a short time the old sailing liners were of no more value than so much wood and iron. Our screw line of battle ships were then held to be the very *ne plus ultrà* of invention; no one dreamed that any thing could go beyond them: but in a very short time another revolution took place, and ironclads superseded the screw liners; and the latter shared the fate which they had brought on the sailing ships. So railroads destroyed the value of coaching property: one book destroys the value of another: one invention destroys the value of another.

So the same thing is of use in one place and not in another. An eight-oared outrigger is a very useful and valuable thing on the Thames; but of what use, or value, would it be in the Sahara?

So however useful a thing it may be in itself, an excess of quantity may deprive it of value. Thus the common illustration of water. Nothing is more necessary and useful, but its excessive quantity deprives it of value. Corn is also most necessary, but it has often happened in agricultural countries which had no means of communication with others, that an excessive quantity of corn has been produced in some years, and has rotted in the ground for want of some people to eat it. So cattle and sheep are in themselves very useful things for human support, but in the Pampas of South America, and in Australia, in former times, they multiplied so far beyond the powers of the people to consume them that the cattle were of no value beyond that of their hides, and the sheep of no value except to boil down into tallow.

It has long ago been observed that many things of no utility

have enormous Value; and indeed instances of this are so numerous and have been so often quoted, that it is quite superfluous to cite them. And indeed it would be difficult to say what the "Utility" is of a very large portion of things that have value.

A very little reflection will shew that utility is so vague an expression that it cannot be made the basis of value. But there are also a great many things which have value, to which it would be a great debasement of the word utility to apply it to them at all. The depraved tastes and licentious appetites of too large a portion of mankind confer a Value upon things of the most noxious and mischievous nature. In former times there was undoubtedly, and even now there would be, unless suppressed by the stern rigour of the law, a large sale for low and licentious literature and pictures. It is impossible to deny that such things have Value, and are Wealth, as long as there is a sale for them, as much as the most excellent things: but would any one debase the word utility by applying it to them? And yet while such masses of abomination meet a ready and large sale, no Economist can refuse to class them as wealth.

Value, then, like Colour and Sound, exists only in the Human Mind. There is neither Colour, nor Sound, nor Value in nature. To say that a thing is useful is entirely the result of a certain state of mind. Dugald Stewart has some very pertinent remarks on a similar subject[1]—"To this reference of the sensation of colour to the external object, I can think of nothing so analogous as the feelings we experience in surveying a library of books. We speak of the volumes piled up on its shelves, as *treasures* or *magazines* of the knowledge of past ages; and contemplate them with gratitude and reverence, as inexhaustible *sources* of instruction and delight to the mind. Even in looking at a page of print, or of manuscript, we are apt to say, that the ideas we acquire are received by the sense of sight; and we are scarcely conscious of a metaphor, when we employ this language. On such occasions we seldom recollect, that nothing is perceived by the eye but a multitude of *black strokes drawn upon white paper*, and that it is our own acquired habits which communicate to these *strokes* the whole of that significancy whereby they are

[1] *First Preliminary Dissertation to the Encyclopædia Britannica, p. 66. Eighth Edition.*

distinguished from the unmeaning scrawling of an infant or a changeling. The knowledge which we conceive to be preserved in books, like the fragrance of a rose, or the gilding of the clouds, depends for its existence on the *relation* between the OBJECT and the PERCIPIENT MIND; and the only difference between the two cases is, that in the one, this relation is the local and temporary effect of conventional habits; in the other, it is the universal and unchangeable work of nature. The art of printing it is to be hoped will in future render the former relation, as well as the latter, coeval (*sic*; coequal?) with our species; but in the past history of mankind, it is impossible to say how often it may have been dissolved. What vestiges can now be traced of those scientific attainments which, in early times, drew to Egypt, from every part of the civilized world, all those who were anxious to be initiated in the mysteries of philosophy? The symbols which still remain in that celebrated country, inscribed on eternal monuments have long lost the correspondent MINDS which reflected upon them their own intellectual attributes. To us they are useless and silent, and serve only to attest the existence of arts of which it is impossible to unriddle the nature and the objects.[1]

"Variis nunc sculpta figuris
Marmora trunca tamen visuntur, mutaque nobis
Signa repertorum tuimur, cecidere reperta.

"What has now been remarked with respect to *written characters* may be extended very nearly to *oral language*. When we listen to the discourse of a public speaker, eloquence and persuasion seem to issue from his lips; and we are little aware, that we ourselves infuse the soul into every word that he utters. The case is exactly the same when we enjoy the conversation of a friend. We ascribe the charm entirely to his voice and accents; but without our co-operation its potency would vanish. How very small the comparative proportion is which in such cases the words spoken contribute to the intellectual and moral effect, I have elsewhere endeavoured to shew."

Similar remarks apply very strongly to the word Utility.

[1] It is scarcely necessary to remind our readers that since Stewart wrote this, a series of illustrious men, beginning with Young and Champollion, have unriddled the nature and objects of these mysterious symbols; and thus the *percipient minds* are again brought into relation with these signs which are now no longer silent and useless.

Whether an object has utility depends entirely on the habits of feeling and the *percipient mind* of the person with whom it is brought into relation. While things remain in all respects the same, the fashion or desire for them changes. Things rise and fall in value, without undergoing any change in themselves—the change is in the *mind* of the public. It is according to the state of the percipient mind that Value is shed upon, or dies off from, any object. Locke, in the same essay in which he ascribes the value of land to labour, says, § 46—"Gold, silver and diamonds are things that fancy or agreement hath put the value on more than real use, and the necessary support of life." Also—"The invention of money and the tacit agreement of men to put a value on it." Now it is contrary to true science to make Labour the cause of Value in some cases, and fancy or agreement, in others. That destroys the *generality* of the science. We must search for some single cause, which is the cause in all cases whatever.

17. Seeing, then, that Labour and Utility altogether fail to stand the test of being the *Cause* of Value, what remains? The only thing which ancient writers, Aristotle, the author of the *Eryxias*, and the Roman Lawyers; in modern times, the Physiocrates, Smith, Condillac, Whately, Bastiat, J. B. Say, and many others have observed—EXCHANGEABILITY. And what does exchangeability depend upon? If I offer something for sale, what is necessary in order that it may be sold? Simply that some one else should DEMAND it. Aristotle said long ago that it is χρεία, or DEMAND, that binds society together.

Here it is quite clear that we have now got the true Source, or Origin, or *Cause* of Value. It is DEMAND. Value is not a quality of an object, but an *affection of the mind*. The sole Origin, Source, or Cause, of Value is HUMAN DESIRE. When there is a Demand for things, they have Value: when the Demand increases (the Supply being supposed the same), the Value increases; when the Demand decreases, the Value decreases: and when the Demand altogether ceases, then Value is altogether gone.

It is Demand which discriminates between the diamond and the rubbish, the pearl and the shell. It is because some people demand cigars, that among them cigars have value: and because

other people do not demand them, that among them cigars would have no value.

It is the intensity of Demand which confers such enormous value on the ground in the heart of London; and the gradually diminishing demand which makes land less valuable as the distance from the centre increases.

What is it that gives value to the produce of the farmer? It is the demand of the people for food and clothing, and their readiness to give something in exchange for its products. If it were possible to imagine that the people should cease to require food and clothing; or should they change their tastes, and require such food and clothing as could not be produced in England, then the value of the land would immediately die off; unless the products were exported to exchange for the products of other countries.

It is perfectly clear, therefore, that though much labour has been bestowed on the land, and the land has great value, that Labour is not the *Cause* of the Value of the Land. But men, knowing that people will want food and clothing, invest their money, and bestow their labour, upon the land to produce something that is wanted by men. They sow corn and rear cattle, because they expect that there will be a permanent demand for such products. But if the people were to become vegetarians, where would the value of the cattle and flocks be?

So in the same way it is the wants and desires of men that cause others to invest their money and labour in any pursuit whatever, and which gives value to that product.

So men invest their labour and money in acquiring a knowledge of Law, because they expect that legal differences will arise among men, and that such services will be wanted; but if they obtain no employment, their labour has no value.

So other men invest their labour and money in acquiring a knowledge of medicine and surgery, because they expect that men will be assailed by diseases, and exposed to accidents, and require their services; but if there were no diseases and no accidents, where would the value of their labour be?

And the same thing is true of each of the professions in succession: men devote their labour to acquire a knowledge of architecture, painting, sculpture, civil engineering, &c., because they expect that other men will want and be willing to pay for

such services. It is the demand of the community, and that only, which confers value on them. And if the demand of the public were to cease, the whole value of the labour of those who had devoted themselves to their acquisition would be lost.

The value of the land solely arises, as we have seen, from the demand of men for its products. And as this demand by the very physical constitution of men is permanent, the land is a source from which an annual revenue springs: and the value of an estate in land is found by finding the present value of all the annual revenue for ever according to certain rules.

But this conception may be generalized. And we may affirm that if men require any service continuously, and will pay to obtain it, the annual revenue, or the sum paid annually to obtain these services, may be capitalized, and form a great estate.

Thus the desire, or demand, of men for Law, for Medicine, for Engineering, for the Military and Naval Services, and for Art and Literature, for professions and trades of all sorts, constitute each of them a great estate, all deriving their value from one great common principle—the wants of mankind, and their willingness to pay for their products. And as it is this desire, or demand, which calls them into existence, and confers value on them, so a cessation of this desire, and the cessation of the willingness to pay for their products, would immediately annihilate their value.

If men ceased to care for art of all sorts and literature, the whole literary and artistic estates would immediately cease to exist. If men inaugurated the reign of universal peace, those great estates, the military and naval professions, would immediately cease to exist. During the reign of George III., the fashion for bobwigs and steel shoe buckles suddenly ceased. Those trades were immediately dissolved, all the capital invested in them was suddenly dissipated, causing dire distress. And the very same thing is true of all trades and manufactures of all sorts. It is the demand for their products which gives them value, and constitutes them capital. Hence every new want and every new desire of men calls into existence, and creates, new capital: every change of fashion, every extinction of a want or desire, extinguishes capital.

And each of these great estates, the land and material products; the law; medicine; art and literature; scientific, trading,

and manufacturing, knowledge; is transmissible and inheritable. No doubt they are transmitted in different ways, but still the general principle is true. In each of the incorporeal estates, especially the professions, or trades, in manufactures, there are accumulated hoards of knowledge, which are augmented by each succeeding generation and transmitted just as much as material products are, and are WEALTH, or Economic Quantities, just as much as material products, and will continue to be so, so long as men continue to want and to pay for them.

And the money and labour men spend in acquiring their knowledge, and cultivating their skill in a useful profession, is in all respects, CAPITAL, just as much as money and labour expended in tilling the ground, or invested in any material product; as we have already shewn is admitted by Smith to be so, although the contrary is generally supposed.

We have already seen how erroneous the doctrine is that *Labour is the Cause of Value.* It is perfectly evident that it is *Value, or Demand, which is the Cause of, or Inducement to, Labour.*

The tribunes of the Commons enunciated the true doctrine long ago[1]—"Eo impendi laborem ac periculum . . . magna præmia proponantur."

Boisguillebert saw this most clearly: he says[2] "Consumption (*Consommation*, or Demand) is the principle of all Wealth"—"All the revenues, or rather all the riches in the world, both of a prince and his subjects, only consist in consumption (*consommation*); all the most exquisite fruits of the earth, and the most precious products, would be nothing but rubbish, if they were not consumed (*Consommés*, Demanded). This it is which makes the most fruitful countries which are not inhabited, and consequently not cultivated, on account of the small number of men, to be almost entirely useless to their prince. Also, if although these countries are filled with subjects fit to give value to the gifts of nature, it is their interest to consume (*consommer*, demand) nothing; or if they are not in a position to do so, neither the country nor the prince are richer than if they had ever so little."

So again[3] he shews that the increase of national revenue is

[1] *Livy, Bk. IV., ch.* 35. [2] *Factum de la France, ch.* 5.
[3] *Le Detail de la France, c.* 19.

proportional, not to the increase of the sum of money, but to the progress of consumption (*consommation*, demand).

So Hume says[1]—"Our passions (desires, or Demand), are the only causes of Labour."

The Italian Economists are very clear and consistent in shewing that human wants and desires are the causes of all Value. Genovesi[2] clearly points out that the words used indiscriminately, *prezzo*, *pregio*, *stima*, *valuta*, *valore*, are words of relation and not absolute, and that they are not applied to intrinsic qualities. That, though money is the apparent or proximate measure, the ultimate measure to which not only things, but their price, is referred is man himself. Nothing has value where there are no men, and the very things which have a low price where men are few, have a very high price where there are many people. And this is the reason why things and services have a much higher price in the capital than in distant provinces.

"Men however do not give value to things or services, unless they want them. Hence our wants are the first source of the value of all things, and price is the power to satisfy our wants. The wants of men are of three kinds; those of pure necessity: those of pleasure: and those of luxury." Genovesi then traces the origin of these wants or demands. He says that nothing has value except in relation to these wants; and the value of things is proportional to the power it has to satisfy our wants. Genovesi then shews how prices are always determined by Supply and Demand: and, after investigating this with great ability, he concludes by saying (1) The wants of men are the first source of the value of everything, and all labour. (2) The price of the same thing as corn, oil, &c., is always in the ratio of the desire and the quality directly, and the supply inversely. And then he says *Value is the child of Demand.*

So Beccaria says[3]—"Value is a substance which measures the estimation in which men hold things."

So Verri[4] shews that it is the wants of man which give rise to commerce, and as their ideas and wants increase so does commerce increase. Nations which increase their wants increase their power and their happiness. Desire, or demand, incites man

[1] *Essay on Commerce.* [2] *Lezioni di Economia Civile, part* ii., *ch.* 1.
[3] *Del disordine, e de' rimedj, delle monete, nello stato di Milano.*
[4] *Meditazioni sulla Economia Politica.*

to commerce. Commerce requires demand and abundance, desire for the merchandize sought, and abundance to give in exchange for it; and as a nation progresses from the few and simple wants of the savage state to new wants and necessities, it must proportionally increase its annual production, so that it may have enough beyond its annual consumption to purchase foreign goods. They then require something to ascertain the equality between what they give and what they receive. Value is a word which denotes the estimation which men make of a thing. Verri also shows that all variations in price proceed from variations in supply and demand.

We have already shewn that the Physiocrates made all Value proceed, or arise, from Demand: and they shewed that things which remained without demand (*consommation*) were without value.

Condillac is also very clear and explicit on this subject. He says[1]—"This esteem is what is called Value"—"Since the value of things is founded on the want of them, or the demand, it is natural that a want more strongly felt gives things a greater value: and a want less felt gives them less value. The value of things increases with their scarcity, and decreases with their abundance. It may even, on account of this abundance, decrease to nothing. A superfluity for example will be without value, whenever we can make no use of it.

It is therefore carefully to be observed that value does not depend upon the absolute qualities of anything. Water is an absolute necessary, but we only require a certain amount of it. More than this certain quantity is of no use, and therefore of no value. So it has often happened that in agricultural countries the crops have been extraordinarily abundant, much more than sufficient to supply the people, but from want of means of communication, they were unable to exchange them away for something else, and so they have lain and rotted on the ground. In these cases the quality of the corn was exactly the same, one portion was the result of labour as much as the other, but it was not required, and therefore it was not wealth. In a similar way the cattle introduced by Europeans into the Pampas multiplied so enormously, that the scanty population could not consume them, and they had no value except for their hides. In

[1] *Le Commerce et le Gouvernement*, *ch.* 1.

Australia, some years ago, sheep increased so much beyond the demand for them, that they were of no value except to boil down into tallow. But lately they have discovered a method of preserving beef and mutton in tins so as to be able to be exported to England. Thus, these flocks will now acquire an immense value, and become a source of boundless wealth to the Australians, by being exported to England and purchasing all sorts of things they may require in England.

Condillac then observes—"A thing has not value because it has cost much, as is commonly said; but people bestow expense on it because it has Value." *i. e.*, there is a demand for it.—"But some have been led to regard Value as an absolute quality, which is inherent in things independently of the opinion we have, and this confused notion is a source of bad reasoning. We must remember that though things have only a value because they have qualities which make them useful to us, they have no value for us, if we do not know that they possess these qualities."—"As soon as we want a thing it has value, and only for that reason." Condillac then shews how that which was not wealth becomes wealth by exchange: and how the wants of mankind as they increase give rise to the arts, and how the arts increase the mass of wealth.

18. We have seen that even Smith, who is commonly supposed to have founded all his ideas of Wealth and Value upon Labour, says that if the product is not exchangeable it is not wealth: which shews that, after all, he made exchangeability the real test of Value. Now it is evident that the exchangeability of two products can only proceed from reciprocal Demand.

Smith, who in the commencement of his work filled his readers' minds with the notion that Labour is the cause of value, has in one passage seen that the truth is just the opposite. Speaking of the vine,[1] he observes that it "is more affected by the difference of soils than any other fruit tree. From some it derives a flavour which no culture or management can equal, it is supposed, on any other. This flavour, real or imaginary, is sometimes peculiar to the produce of a few vineyards: sometimes it extends through the greater part of a large province. The whole quantity of such wine that is brought to market falls short of the

[1] *Book* i., *ch.* ii.

effectual demand, or the demand of those who would be willing to pay the whole rent, profit, and wages necessary for preparing and bringing them thither, according to the ordinary rate at which they are paid in common vineyards. The whole quantity therefore can be disposed of to those who are willing to pay more, which necessarily raises the price above that of common wine. The difference is greater or less, according as the fashionableness or scarcity of the wine render the competition of the buyers more or less eager. Whatever it be, the greater part of it goes to the rent of the landlord. *For though such vineyards are in general more carefully cultivated than most others, the high price of the wine seems to be, not so much the effect, as the cause of this careful cultivation.*"

Now it is easy to see that this last sentence is entirely antagonistic to the whole of the rest of the system of Smith and Ricardo, and both doctrines cannot be true. In their general system they make it appear that *Labour is the cause of Value:* but here Smith has seen and acknowledged that it is *Value which is the inducement to Labour.* Now it is no more possible in Economics to adopt one of these doctrines to explain some phenomena, and to adopt the other doctrine to explain other phenomena, than it is in astronomy to explain some phenomena by the Ptolemaic hypothesis, and other phenomena by the Copernican: or in optics to explain some phenomena by the Corpuscular hypothesis, and other phenomena by the Wave theory. One or other doctrine must be universally true. It is perfectly clear that the latter doctrine is the true one, and the rest of the system is fallacious.

So Whately says[1]—"In this as in so many other points in Political Economy, men are prone to confound *cause* and *effect.* It is not that pearls fetch a high price *because* men have dived for them; but, on the contrary, men dive for them because they fetch a high price."

So also J. B. Say, who adopts the doctrine that Utility is the basis of Value says[2]—"Riches can only be valued by an *exchange*, by means of which their value is stated"—"You see that wealth does not depend on the species of the things or on their physical nature, but on a MORAL quality which every one

[1] *Lectures on Political Economy.*
[2] *Cours, part* i., *ch.* 1.

calls their value." And he also says [1]—"Value is purely a MORAL quality, and appears to depend on the fugitive and changeable will of men." And he elsewhere says that Demand is the first foundation of all value. Now it is strange indeed that so able a writer could not see the incongruity in making Value to be, in one place, the qualities of an object, and in others, a moral quality of the mind.

So also Bastiat places the source of Value entirely in the mind. He says [2] —"Exchange does more than state and measure values, it gives them existence"—"The idea of Value came into the world the first time a man said to his brother: Do this for me, I will do that for you: they agreed upon it: because then it might for the first time be said, the two services exchanged were equal (*se valent*). . . . We labour to support, clothe, shelter, light, heal, protect, and instruct each other. Thence reciprocal services. We compare these service, we discuss them: we estimate their value: thence comes VALUE.

19. Hence we see that DEMAND is the sole Origin, Source, and Cause of Value. It is Demand, or Consumption, and not Labour which gives Value to a product. It is not the Labour which gives value to the product, but the Demand for the product which gives value to the Labour. HENCE IT IS NOT LABOUR WHICH IS THE CAUSE OF VALUE, but it is VALUE WHICH IS THE CAUSE OF, OR INDUCEMENT TO, LABOUR.

Value then in its true sense signifies an *Affection of the Mind*, and not a Quality in an object, either natural, or the result of labour. The usual phrase is "I value so and so." It is the force of attraction between the mind and some external object. But an impotent desire of the mind, not manifested by any overt act, is not an Economical phenomenon. In order to enter into the science of Economics something must be done. But even the desire of a single mind is not sufficient to produce an act. A man may have things he wants to sell, but if no one will buy them, they have no value. He may wish to possess things offered for sale by others, but if they do not want, and will not take in exchange, what he offers, no exchange can take place. In order to constitute an exchange two persons must each produce something, and each must want what the other

[1] *Ibid. Considérations Générales.* [2] *Harmonies Economiques. De la Valeur.*

produces. And it is the reciprocal desire of each for the product of the other that gives rise to an exchange. Hence the concurrence of two minds is essential to produce an exchange, or an Economic phenomenon. Each one will try to give as little as he can of his own product, and get as much as he can of the other's product. Hence when the exchange ultimately takes place, the quantity exchanged by each measures the intensity of his desire to obtain possession of the product of the other. And hence the Quantity given by each is called THE Value of the other.

20. All production is founded upon speculation. Producers find out or think of what other people want, and then they produce. A constant supply of some things is wanted. Inventors hope that they may excite or create a desire, but it is no reason that people will buy, because others produce; and if none want or will buy what is produced, such an article has no *value*. All production, then, is founded on speculation, varying through all degrees of prudence, certainty, and risk. All producers speculate that there will not only be buyers who will want their products, but will want them to such a degree of intensity as to be willing to pay a sum at least sufficient to pay the cost of production, and a profit besides, sufficient to remunerate them for their time and trouble. Now, the powers of consumption generally speaking are limited, but in most cases the powers of production are more easily extended, and the amount of value, or the price, depends upon the proportion between the production, or the supply, and the number of persons who are willing to give an adequate price, or the consumption, and hence production must always be adjusted to consumption, and not the reverse. Hence, also, we have this fundamental truth that SPECULATION IS THE MOTHER OF PRODUCTION, BUT DEMAND IS THE ORIGIN OF VALUE.

21. Labour is in no case, whatever, the cause or foundation of value. No amount of Labour, or cost of production, can ever bestow or ensure value. In all cases whatever, it is because articles have great value, that great labour or great expense is expended in producing them. It is, then, universally the RESULT, and the result only, which has value, whether that

result be obtained by great or by little labour: although it is undoubtedly true, that valuable results are often associated with great labour or expense. Nevertheless, we must rigidly guard ourselves from thinking that it is the labour that confers the value. An able and skilful man may obtain a result of great value with comparatively little labour, and an inferior man may bestow many times the amount of labour, and never attain so valuable a result. No class of persons are so apt to estimate the value of a thing by the labour it has cost them as authors, and consequently it is a very common remark that authors are generally the worst judges of the relative value of their own performances. Archbishop Whately cautions an intended writer of the History of Logic thus, "he should possess the power of rightly estimating each according to its intrinsic importance, and not (as is very commonly done) according to the degree of laborious research it may have cost him." And this remark is of universal application.

22. We must also be on our guard against admitting a specious form of expression which J. B. Say uses—"Thus, without examining yet, why olive oil is worth 30 sous a pound at Marseilles, and 40 sous at Paris, I say that he who sends it from Marseilles to Paris *adds* 10 sous to the value of each pound of oil."[1] "Products successively increase their value in passing through the hands of their different producers."[2] It is never the producers that confer value, but the consumers; it is each successive consumer that confers the value. If it was the cost of transport that *added* to its value, it would necessarily follow that to send it back again from Paris to Marseilles would still further add to its value, and to send it backwards and forwards twenty times ought to add twenty times the cost to its value. The truth manifestly is that people incur the cost of transport because they expect that the difference of the value between the two places will repay the cost; but no cost of transport can really add to its value. Thus a Library or Museum may be brought up to London from the Country for sale, but the expenses of the transport do not add to the value of the books, but they are brought up to London because it is expected that their higher value in London will repay the cost of bringing them there.

[1] *Traité d'Economie Politique*, p. 101. [2] *Ibid.*, p. 531.

To exemplify, and still further to enforce, the truth of this principle, we may take the case of diamonds and other precious stones. Their value depends entirely upon their rarity, and the extreme desire of rich persons to possess them, and has no appreciable relation to the labour of finding them. They have acquired a certain estimation in the eyes of men for certain reasons, and they are scarce, and it flatters the pride of men to be the possessors of rare articles. The finding of diamonds is a great hazard, and they are only found in a few places, and of certain sizes. If a few persons were to be so fortunate as to discover a few hundreds of diamonds of large size, their value would be immensely diminished all over the world; nor would it be possible to assign what proportion the labour of producing them would bear to their price. On the other hand, were a million of men to devote themselves to search for them, and if they searched in vain, and found none, that circumstance would not have the smallest effect in raising the value of a single diamond. So that the real truth is, that men are willing to devote themselves to search for diamonds, because they are of great value when found. A diamond is not valuable because a great deal of labour has been bestowed on finding it, but a man searches for diamonds because, though he may only find one at rare intervals, the value of it when found is so great, that it will repay him for a long course of unsuccessful labour. Thus, also, pearls are not dear because so many fishermen seek for them, but so many fishermen labour to find them, because they are highly esteemed, and rich people are willing to pay high prices for the pleasure of possessing them. Hence, we may say, that it is true of diamonds and pearls, and all that class of productions, that a great deal of labour is bestowed on producing them, because a high price is given for them; and that it is a mistake to say that a high price is given for them because a great deal of labour is bestowed on producing them. Sidney Smith was in a fever of anxiety to sell some jewels he had, to set up house, lest mankind should awake from their folly and refuse to buy these glittering baubles. No examples can be taken better than these to show the total want of any necessary relation between *labour* and *value*.

23. An attentive consideration of this last example is of the utmost importance, and is of universal application in Political

Economy. We observe that the *quality* of the diamond is not in any way affected by the quantity of labour bestowed on finding it. A diamond of the first water may be found after a search of five minutes; a search of as many days, months, or years, may only be rewarded by finding a very inferior one. But yet the result of the lesser amount of labour may be far more valuable than the result of the greater amount. This is a universal truth in Economics. In all cases it is the *result*, and that only, which is looked to, wholly independent of the labour by which it has been arrived at.

24. The clear understanding that it is Demand, and not Labour, which is the sole cause of Value, and the basis of Wealth, gives the true and simple solution of the question which so long puzzled the world. Cicero and Luther were wholly unable to understand how a person could gain in an exchange, except by robbing the other. It was the universal doctrine before the first school of Economists, that what one side gained, the other lost. The Physiocrates however maintained that in an exchange neither side gained, and that it was an exchange of equal values. They saw that each product was valued in money at the same sum; and therefore they maintained that neither side could gain. Nor was it easy to see the fallacy of this reasoning, although a little reflection on the facts must have shewn them that nations became enriched by commerce. Still less is it easy to see the fallacy, if we adopt the doctrine of the second school of Economists that all value depends upon the quantity of labour bestowed upon a thing. For if the Value is exclusively determined by quantity of Labour, it is only an exchange of equal value.

But when we firmly grasp the principle that Demand is the sole cause of Value, and that no Labour can give value to a product, whatever its qualities be, which is not wanted, the solution of the problem is obvious and simple.

A shoemaker perhaps makes 50 pairs of shoes: but he is not a centipede, and therefore he does not want 50 pairs of shoes: therefore all the shoes he makes above his own requirements are so much labour thrown away, without any result. These superfluous pairs of shoes are no more wealth than the corn which we spoke of before, as rotting on the ground for want of some one to consume it.

A glovemaker makes 50 pairs of gloves: but he is not a Briareus: therefore he does not want 50 pairs of gloves: therefore as in the former case, all the gloves he makes above his own requirements are so much labour thrown away without any return.

A tailor makes 50 coats; but he has no use for so many; consequently all the labour and materials used in making them are utterly wasted and thrown away.

A farmer grows corn upon 500 acres of land, and has a herd of 100 cattle: but his family and dependents cannot eat the corn grown upon 500 acres: nor 100 cattle: therefore all the corn he grows, and the cattle he rears, above his own and his family's wants, is just so much labour and expense thrown away.

An author does not want more than a very few copies of his own work. The vainest author does not want 1,000 copies of it. Hence all copies printed above those sufficient to satisfy his wants, are so much labour and money thrown away.

And so on through the whole catalogue of producers and products. If a man bestows labour upon producing what he does not want, it is so much labour thrown away without any return.

But the shoemaker, the glovemaker, the farmer, the author, and all other producers as above, cannot live on their own products solely. The shoemaker wants gloves, food, clothes, books, &c. The glovemaker wants shoes, food, clothes, books, &c. The farmer wants shoes, gloves, clothes, books, &c. The tailor wants shoes, gloves, food, books, &c. The author cannot live on the fumes of self incense; he requires shoes, gloves, clothes, food, &c. Hence each producer begins to exchange the superfluity of his own produce for the superfluity of each of the others; the shoemaker exchanges some of his shoes for gloves; others of his shoes he exchanges for clothes; others for food, and so on, for any other products he may require. Similarly each of the other producers exchanges some of his products for others he requires. Hence Demand arises for the products of each producer which were before without demand, and without value. It is the demand of the shoemaker for gloves which gives value to the gloves of the glovemaker, which were superfluous and not wanted by him. Hence, by means of this exchange, the labour of each producer has brought him something he does want, and which he does value; instead of something

he does not want. And it is this reciprocal Demand, or Consumption, which gives value to each product in succession. The labour of the shoemaker now produces him gloves, clothes, food, books, and any other product he may want, and therefore Value. Each producer has therefore got something he does want, instead of something he does not want; and hence each side has gained, or got a reward for his labour.

25. Some persons indeed consider that it is an inadequate account to say that Value originates in Demand, but that the Economist should go further, and investigate the causes of Demand. But this would be a great error. This would introduce the whole of Psychology into Economics. It would be as great an error in the mental, or subjective, department of the subject, and of a similar nature, to what it would be in the external, or objective, department, to investigate the whole processes of agriculture and commerce. An Economist, *quà* Economist, has no more to do with the causes which operate on the mind to produce Demand, or Value, than an Astronomer, *quà* Astronomer, has to do with the metaphysical cause of gravity. An Astronomer's business is to discover the *Laws of the Phenomena* of the motions of the heavenly bodies, and there the science ends. What may be the cause of the Law of Gravity is another and a higher consideration. Similarly Economics rigorously excludes all considerations of the preparation and cultivation of the mind which produces the desire, or the Demand, equally with all considerations of the preparation and cultivation, or manufacture, of the product. The considerations which produce Demand, or Value, are the province of the Moralist; the processes of agriculture and manufacture are the province of the farmer and the manufacturer. Economics deals only with the desire, or the Demand, which is the cause of Value, and the product which is the subject matter of Value.

26. The clear conception that it is Demand, or Consumption, and not Labour, which is the principle of Value and of Wealth, shews how mistaken are those demagogues who go about flattering the "working classes," and telling them that they are the producers of all wealth, with a view to rising into public importance by their means. It is not the Producer but the Consumer

who causes a thing to be Wealth; and all the labour of the working classes would be thrown away if they could find no one to demand or consume it. Each class of society, therefore, is necessary to the other. If, therefore, a man has nothing to offer for sale but his labour, so far from being at enmity with, or hostile to, the wealthy classes, he ought to wish for the greatest number possible of rich people to demand the products of his labour.

27. When Locke said that the differences of value of agricultural land were due to labour, in which he has been followed by so many Economists, it was a striking example of Bacon's remark[1]—"For no man can rightly and succesfully investigate the nature of a thing in the thing itself,"—but must vary his observations, and appeal to all sorts of experience. When Locke and his train of followers point to the smiling harvests and vintages, and assert that the cause of the differences of the value of the land is labour, they should remember that the cause of the difference of value in agricultural land must be the cause of the differences of value in everything else: and we point to the differences in the value of different parts of the ground on which London stands, and ask—Are these differences of Value due to Labour? When this school of Economists point to manufactures of all sorts, watches, furniture, clothes, &c., &c., and say that their value is due to labour, we place before them the accounts of the Bank of England, which on the 4th October, 1872, stood thus; as made up in the old form.

LIABILITIES.	£	ASSETS.	£
Notes Issued . . .	27,589,360	Securities	38,091,424
Public Deposits . .	8,842,382	Coin and Bullion . .	21,156,452
Private Deposits . .	19,004,036		
	55,435,778		59,247,876

Now we observe that one side amounting to £55,435,778 consists wholly of liabilities or Credit, and of the other side, £21,156,452 consists of money, and £38,091,424 of liabilities or Credit. The liabilities or Credit, however, is valued exactly as if it were so much money. Now we ask what is the cause of

[1] *Distributio Operis.*

the value of this Credit? Is it Labour? When some Economists point to a large amount of material commodities, the produce of labour and of great value, we point to a table given by Mr. Mill[1] shewing the amount of Bills of Exchange created in Great Britain

In	1837 - -	£455,084,445
	1838 - -	465,504,041
	1839 - -	528,493,842

and ask what is the cause of the value of this enormous mass of Credit, which of course is but small compared to the Credit created now? Is Labour the cause of its Value?

28. As we ascend Father Thames, passing by Putney, Hammersmith, Kew, Richmond, Kingston, Eton, Oxford, &c., we find the river banks crowded with exquisitely built boats of all sorts. Why are these boats there? And what gives them Value? It is simply because the youth of England are fond of rowing. It was not the building of the boats which made the English youth fond of rowing; but their love of rowing which encouraged the builders to build the boats. What value would such boats have among a people whose favorite aphorism is *dolce far niente?*

29. When we visit the Santa Casa at Loreto, we see the great square in front of the church filled with shops, whose principal wares are waxen models of different parts of the human body, the heart, legs, arms, ears, &c. What gives value to these things? They are meant as offerings to the Virgin, for her supposed kind influence in healing the part of the body they represent. So that the custom which led Horace to offer up his dripping garments to the god of the sea, still flourishes in undiminished vigour among the modern Italians. Would these things have any value among Protestant Englishmen?

In 1846, two children near La Salette, in France, averred that, while tending their flocks, the VIRGIN had suddenly appeared to them, and confided to them a secret which they were to tell to no one but the Pope. They were taken to Rome

[1] *Book* iii., *ch.* 12, § 6.

and had an interview with Pius IX.—"The Roman Catholic Church took the alleged miracle under its patronage; medals and crosses were struck in commemoration of it; prayers were composed recording the occurrence; a splendid church was built near the spot where the Virgin had appeared, leaving behind, as a memento of her visit, a spring of water, *which has ever since brought in a rental larger than that of almost any vineyard in France;* and the shrine of La Salette has, in a quarter of a century, become as famous as that of Loreto, in spite of the long start of the Italian sanctuary."[1] Now, is the rental of the ground where this spring is situated due to labour? It is quite clear it is due to the belief of the people in the alleged miracle. If this belief were to die off, the value of the ground would immediately die off. Need we be surprised that another appearance of the Virgin was got up near Lourdes, about 24 miles from Pau, in 1859, and that the church and the spring of Lourdes now rival those of La Salette. The only wonder is that every parish in France does not get up an appearance of the Virgin on its own account, seeing that they are so profitable.

30. We need occupy no more time in shewing that Value results entirely from a state of the mind. "What is aught but as 'tis valued?" says Troilus.[2] When Locke points to the untutored Indians and shews the miserable state they are in from want of industry, it is plain that it is not so much *labour* that is wanting among them, because the labour they undergo on occasions, is almost incredible, but the desire, or the DEMAND for the comforts and conveniences of civilized life. What is it that kept the lower Irish, the Highlanders of Scotland, the Southern Italians, and many other people so poor and miserable? Simply the absence of the desire, or the want, of better things. When merchants export their commodities to uncivilized nations, they know well enough that the first thing that must be done is to inspire the people with the desire for their goods. What use is there in offering cotton goods for sale to people who have no desire to be clothed? The same principle runs through everything; in civilized as well as in uncivilized nations. For anything to have Value there must be a demand for it. And is the

[1] *The Standard, Sept. 24th*, 1872. [2] *Troilus and Cressida, Act II., sc. 2.*

Demand always for the most useful and the best things? Every one's experience will say No, to such a question. How often are the best and most useful things opposed by ignorance, by prejudice, and by hostile interests!

We conclude, therefore, that it is not labour, but consumption, exchange, or DEMAND, alone that constitutes a thing wealth, and we trace the progress of a nation in wealth, according to their increasing wants and desires. First, the demand for the sustenance required by the body, gives value to material products, food, clothing, shelter, and fuel. Then as their tastes become refined, arises the demand for works of literature, science, and art: for painting, for sculpture, for architecture, for the drama, and for music. It is the demand of the public alone which makes these things wealth. Hence, in order to be wealthy, a people must be inspired with strong and various desires: and this shews the great importance in an Economical point of view of national education. Heavy taxes can only be borne by an industrious and a wealthy people: and the multiplication of wants, multiplies industry, multiplies capital, multiplies incomes, multiplies the persons to bear the burden of taxation, and renders the nation capable of great achievements, and of taking a leading position in the councils of the world.

SECTION III.

ON THE GENERAL LAW OF VALUE: OR THE GENERAL EQUATION OF ECONOMICS.

31. Having in the preceding sections given the Definition of Value, and found that its Form, or Cause, resides exclusively in the Human Mind, the last branch of our inquiry is to determine the General Law of Value; or the General Equation of Economics; that is to discover a single General Law which governs the changes in the exchangeable relations of ALL Quantities, whatever their nature be.

The acknowledged principles of Inductive Science shew us that there can be but one General Law of Value. We have seen in a preceding chapter that there are three distinct species of Economic Quantities, and we have generalized the fundamental Conceptions of the Science so as to grasp all these Quantities. Now these three species of Quantities can be exchanged in SIX different ways. Our present object is to investigate a General Equation which shall be applicable to all the SIX species of exchanges indifferently. The Law which governs the exchangeable relations of material products, must equally govern the exchangeable relation of debts.

Suppose we make £ the general symbol for an Economic Quantity—that is to say, anything whatever whose value may be measured; and representing these various species of Quantities under the general symbol £, we may say that there are in any country, quantities of this sort,

£546, 497, 208.
£349, 784, 627.
£804, 932, 712.
£ 24, 987, 459.
&c., &c., &c.

Now we affirm by virtue of the principle of the Continuity of Science, and by the great Algebraical doctrine of the *Permanence of Equivalent Forms*, that whatever can be proved to be true economically of any one of this series of Quantities, must be true of them all. No one looking at the series of Economic Quantities placed above, could tell of what species they were.

Some may be land, some corn, some minerals, some ships, some money, some credit, some labour, some copyrights, some shares in commercial companies. Now there can be but ONE Cause of Value for them all. We have demonstrated that DEMAND is the single General Cause of the Value of all Economic Quantities; and this at once annihilates the false distinctions between the causes of value of different species which have been made by Economists.

Having thus obtained these independent Economic Quantities, the purpose of the science is to discover the General Law which governs the variations of their Exchangeable Relations. And by the principle of the Continuity of Science, this Law must be investigated in a manner conformable to the general Theory of Variable Quantities in General. For if not, the whole of Mathematical and Physical Science is shaken to its foundations.

32. Now let A and B be any two Quantities whatever, supposed perfectly general: it is quite clear that their exchangeable relations are contained in the following limits:—

$$\begin{aligned} \infty\, A &= 0\, B \\ \&c. &= \&c. \\ 2\, A &= \tfrac{1}{2}\, B \\ A &= B \\ \tfrac{1}{2}\, A &= 2\, B \\ \&c. &= \&c. \\ 0\, A &= \infty\, B. \end{aligned}$$

The meaning of which is simply this—Let the exchangeable relation between A and B gradually and continuously change from where the greatest possible quantity of A will exchange for the least possible quantity of B to where the least possible quantity of A will exchange for the greatest possible quantity of B.

Now the *Law of Continuity* quoted above[1] says that a Quantity cannot pass from one amount to another by any change of conditions, without passing through all intermediate degrees of magnitude according to the intermediate conditions.

Hence we may affirm by virtue of the *Law of Continuity*—

1. *That if it can be indubitably proved that* ANY *particular Law holds good at any one point in the range of prices, that*

[1] *p.* 42.

same Law must necessarily hold good at ALL *points throughout the whole range of prices.*

2. *That as the symbols A and B are perfectly general, if any Law whatever can be proved to hold good in the variations of the exchangeable relations of any two Quantities whatever, that same Law must necessarily hold good in the exchangeable relations of all Quantities whatever.*

Thus by the Law of Continuity we are enabled to affirm—

That if any Law whatever can be proved to be true at any one point in the range of prices, between any two Quantities whatever, that same Law must be necssarily true at ALL *points in the range of prices, and between all quantities whatever.*

And as a corollary from the preceding we may also affirm—

That if any Law whatever can be proved NOT *to be true with regard to the relations of any two Quantities whatever, that Law cannot be a General Law of Economics.*

33. No one who understands the principles of philosophical reasoning which are universally allowed to be conclusive in other sciences, and wishes to preserve that continuity of the sciences so earnestly insisted upon by Bacon, can fail to see that these considerations are true. If it be possible to obtain a general philosophical rule, it must be applicable to all cases. It is the very essence and genius of the Inductive Philosophy to analyze particular cases, educe general rules from them, and shew how they apply to all other cases. It is the very test of the truth of rival theories to explain particular cases. There is no other way of testing their truth, and, accordingly, when two apparently plausible theories have been brought to the trial, and one of them has failed to account for phenomena, it has invariably been rejected. A true theory, therefore, must account for all the phenomena in a science. It must be true in all classes of cases, and to any extent. A single fact that can be shewn to be absolutely irreconcilable with a theory is fatal to it.

In many other sciences it has happened that theories have appeared to account for a considerable number of phenomena, and have for a long time been accepted as true, but in course of time other classes of phenomena were observed which were wholly irreconcilable with the received theory. It, consequently, became necessary to devise new theories capable of

comprehending the new classes of facts. Of course it was manifestly necessary that the new theory should absorb all the facts accounted for by the old one, and explain them equally well. When this has happened, when it has been proved that the new theory accounts for all the observed facts, the old theory has been invariably superseded, and the new one adopted.

Precisely the same process of reasoning holds good in Economics. Just as it is a universally acknowledged principle in experimental science that that law only is the true one, which explains all the cases in the subject, we lay this down as an unquestionable truth in Economics—

That if two or more forms of expression will explain or account for any phenomena regarding price, or the change of price, that form of expression only is to be adopted as the true one, which explains all the phenomena in the science, and not the individual case only.

Thus we affirm by virtue of the Principle of Continuity of Science, and arguing from the analogy of every other physical science, that however varied and complicated the different phenomena of Value may appear to be, there can by no possibility be more than one grand General Theory of Value, whatever it may be. To suppose that the phenomena of the science could be based upon divers conflicting Theories would be at once to destroy the GENERALITY of the science.

34. Lord Lauderdale in a work quoted by Ricardo, and which contains little else of any worth, says,[1] that of two Quantities which may each vary, if we suppose the variation to take place in one of them first, the other remaining the same, its Value would be influenced by *four* causes:

It would *Increase* in Value—

1. *From a Diminution in Quantity.*
2. *From an Increase of Demand.*

It would *Diminish* in Value—

1. *From an Increase of Quantity.*
2. *From a Diminution of Demand.*

Now as the variations of the other Quantity will be influenced by the same *four* causes: it is quite clear that the variations of both Quantities will be influenced by *eight* independent causes,

[1] *An Inquiry into the Nature and Causes of Public Wealth*, p. 12.

and if these be connected in the form of an Algebraical Equation, it will manifestly be the true General Equation of Economics.

This General Equation must manifestly comprehend the whole science; and as it contains no less than EIGHT Independent Variables, it at once shews the extremely complicated nature of the science.

Now Ricardo admits this Law to be true for all monopolized commodities, and for all others during a limited period. But his want of training in Inductive Science prevented him from seeing that if it be true in any one case, it must be true in all.

The fact is that the Law of Supply and Demand, of which the above extract from Lord Lauderdale is the full expression, is admitted by all Economists to be true when the price of things is very low; and it is also admitted to be true when the price is very high. No other Law whatever but that of Supply and Demand operates at the *extremes* of prices: and therefore it is manifest by the *Law of Continuity*, that all intermediate prices must be governed solely by the same Law of Supply and Demand.

It is quite manifest that the above is the true General Equation of Economics; and the whole science must be constructed taking that Equation as the basis.

In obtaining this general expression we have followed the method usual in all physical science. We have obtained the *Independent Variables*, and they are connected by a General Law, or *Formula*. This insures *certainty* to the science. But it is in the last point that the real difficulty arises, namely in giving *precision*, or numerical amounts to the *Coefficients*. It is difficult, probably impossible, to say what numerical variations in supply and demand produce certain numerical variations in price. This has been attempted in some cases, as that of corn, but it is manifestly impossible to obtain exact numerical data.

It is this difficulty, or rather let us say the entire impossibility of giving exact numerical values to the Coefficients, that makes many writers suppose it impossible to make Economics an exact science. It is sometimes supposed that for a science to be an "exact" one, it is necessary that its Laws be capable of precise *quantitative* statement. This however is an error which has been specially noticed by Comte, who well points out[1] the dif-

[1] *Introduction.*

ference between *certainty* and *precision* in science. To constitute an exact science it is not necessary that its laws can be ascertained with numerical precision, but only that the reasoning be exact, or certain. He says that a dangerous prejudice has sprung up that because the precision of different sciences is very unequal, that therefore their certainty is so too. This tends much to discourage the study of the most difficult. Precision and certainty are perfectly distinct. An absurd proposition may be very precise, as for instance that the angles of a triangle are equal to three right angles. On the other hand a certain proposition may not be precise, as that a man will die. Hence although the different sciences may vary in precision, that does not affect their certainty. This observation applies very forcibly to Economics. Many persons are apt to despise it, and think there is nothing in it because it does not bring out its results with the same numerical precision as those of Mathematics. This however is a grievous mistake. In Economics the causes of phenomena can be ascertained with positive certainty, and if we want to produce any given effect, the proper method of producing it can be pointed out with absolute certainty. This is all that is necessary to constitute it an exact science; because the method of producing the result being pointed out with certainty, it may be followed until the required result be produced.

35. In considering this general Equation of Economics we see the application of Bacon's aphorism[1] "That which in *Theory* is the CAUSE in *Practice* is the RULE." No other Quantities but Demand and Supply appear on the face of the Equation. We therefore learn that no other causes influence Value, or changes of Value, but Intensity of Demand and Limitation of Supply. We learn that neither Labour, nor Cost of Production, nor anything else, can have any *direct* influence on Value; and that if they have any *indirectly*, it can only be by, and through, the means of altering the Demand or the Supply: so that no change of Labour, or Cost of Production, can have any influence on Value, unless they are accompanied by a change in Demand or Supply.

The great practical importance of these considerations will appear hereafter.

[1] *Nov. Org., Bk.* i., *Aph.* 3.

36. But although there can be only one General Theory which governs all cases, yet there may be many phenomena, and many classes of phenomena, in which *other* causes may modify, vary, and even overpower and reverse the General Law. Thus it is a General Law that bodies will fall to the earth: but in the special case of a balloon inflated with gas lighter than air it will ascend from the earth. Now, no one doubts that the Law of Gravity acts on the balloon to draw it towards the earth: but yet in this special case, the force of the lighter gas overpowers the force of gravity, and makes the balloon *ascend* through the denser medium.

On the Fundamental Objection to the RICARDO-MILL SYSTEM *of* ECONOMICS.

37. We now come to the fundamental philosophical objection to the Ricardo-Mill system of Political Economy, or Economics, and to the application of the remarks we made on the Formation of General Axioms[1], and in the General Statement of the Argument in favour of the Third School of Economists.[2]

While the Italian Economists, the Physiocrates, and Condillac, all held that the Law of Demand and Supply is the great dominating Law of Economics, they felt that some further explanation was wanted to give this law a more definite expression in figures.

Among several writers who have given an analysis of price, Le Trosne shews that among the causes which determine Value, there is a certain amount which is indispensable for all products, namely, the necessary cost of producing them. This he calls[3] the "fundamental price" of products. As the system of the Physiocrates only embraced the material products of the earth, their analysis was of course extremely defective as a general Theory of Value.

Smith began by following very much in the footsteps of the Physiocrates, by leading his readers to think that he considered wealth to be the "annual produce of land and labour," and what the Physiocrates called the "fundamental price" of products,

[1] *Chap.* ii., § 18, 19. [2] *Chap.* iii., § 52.
[3] *De l'interêt social, chap.* i., § 7.

Smith calls their "natural price." He says[1] that there is in every neighbourhood, or society, a natural rate of rent, a natural rate of wages, and a natural rate of profit, and—"When the price of any commodity is neither more nor less than what is sufficient to pay the rent of the land, the wages of labour, and the profits of the stock employed in raising, preparing, and bringing it to market, according to their natural rates, the commodity is then sold for what may be called its natural price."

In this and several other passages, Smith makes rent a necessary part of the price of agricultural products. The obvious inference of this doctrine is, that if the landlords were to agree to forego their rents, corn would be so much the cheaper. But in another passage Smith says that price is the *cause* of rent. The importance of the subject and the self-contradictions of Smith, gave rise to great discussions, of which we have given an account in the chapter on Rent, and therefore they need not be further noticed here.

Ricardo then followed: he divides commodities into two classes—

First. Those in which the supply is absolutely limited, and cannot be increased by human labour, and therefore their value cannot be lowered by an increased supply[2]—"Some rare statues, and pictures, scarce books and coins, wines of a peculiar quality, which can only be made from grapes grown on a particular soil, of which there is a very limited quantity, are all of this description. Their value is wholly independent of the quantity of labour, originally necessary to produce them, and varies with the varying wealth and inclinations of those who are desirous to possess them."

Ricardo says that the value of such commodities is exclusively governed by the Law of Demand and Supply; and among this class of commodities he and Mr. Mill place Labour.

Second. Those commodities which can be increased at will by human labour without assignable limit; and the purport of his work is to investigate the values of this class of commodities solely; though this express limitation of his inquiry is quite overlooked by some of his ardent disciples.

Ricardo says that commodities which can be increased without limit by human industry are divided into two classes:—

[1] *Book* i., *ch.* 7. [2] *Principles, chap.* i., § 1.

1. Those commodities which can be increased to any extent required by human labour, at an equal cost of production[1]—"It is cost of production which must ultimately regulate the price of commodities, and not as has often been said, the proportion between the supply and demand: the proportion between supply and demand may indeed, for a time, affect the market value of a commodity, until it is supplied in greater or less abundance, according as the demand may have increased or diminished; but this effect will be only of temporary duration."

"The opinion that the price of commodities depends solely on the proportion of supply to demand, or demand to supply, has become almost an axiom in political economy, and has been the source of much error in that science."

He then quotes the law given above, and says—"This is true of monopolized commodities, and indeed of the market price of all other commodities for a limited period."

"Commodities which are monopolized either by an individual, or by a company, vary according to the Law which Lord Lauderdale has laid down . . . . . but the prices of commodities which are subject to competition, and whose quantity may be increased in any moderate degree will ultimately depend, *not on the state of demand and supply, but on the increased or diminished cost of their production.*"

2. Those commodities which can be increased in quantity at will, but *not* by equal cost of production, like corn and minerals. An increased quantity of corn can always be procured, but the increased quantity is always obtained at an increased cost. In this class of commodities, Ricardo says that the cost of obtaining the last quantity produced regulates the price of the whole quantity purchased, or consumed. This doctrine is fully examined in the chapter on Rent.

Mr. Mill has generally adopted and amplified this system, and added to it some new distinctions of his own.

38. Before, however, we notice the additional distinctions which Mr. Mill has made, we must examine an objection which he has taken to the common expression that Value depends on the Ratio of Demand and Supply; and in order that there may be no mistake, we will give his own words.

[1] *Principles, chap.* XXX.

He says [1]—"These being the three classes, in one or other of which all things that are bought and sold must take their place, we shall consider them in their order. And first, of things absolutely limited in quantity, such as ancient sculptures or pictures.

"Of such things it is commonly said, that their value depends on their scarcity: but the expression is not sufficiently definite to serve our purpose. Others say, with somewhat greater precision, that the value depends on the demand and the supply. But even this statement requires much explanation, to make it a clear exponent of the relation between the value of a thing, and the causes of which that value is an effect.

"The supply of a commodity is an intelligible expression: it means the quantity offered for sale; the quantity that is to be had, at a given time and place, by those who wish to purchase it. But what is meant by the demand? Not the mere desire for the commodity. A beggar may desire a diamond; but his desire, however great, will have no influence on the price. Writers have therefore given a more limited sense to demand, and have defined it, the wish to possess, combined with the power of purchasing. To distinguish demand in the technical sense, from the demand which is synonymous with desire, they call the former *effectual* demand. After this explanation, it is usually supposed that there remains no further difficulty, and that the value depends upon the ratio between the effectual demand, as thus defined, and the supply.

"These phrases, however, fail to satisfy any one who requires clear ideas, and a perfectly precise expression of them. Some confusion must always attach to a phrase so inappropriate as that of a *ratio* between two things not of the same denomination. What ratio can there be between a quantity and a desire, or even a desire combined with a power? A ratio between demand and supply is only intelligible if by demand we mean the quantity demanded, and if the ratio intended is that between the quantity demanded and the quantity supplied. But again, the quantity demanded is not a fixed quantity, even at the same time and place; it varies according to the value; if the thing is cheap, there is usually a demand for more of it than when it is dear. The demand, therefore, partly depends on the value.

[1] *Book* iii., *ch.* 2, § 3.

But it was before laid down that the value depends on the demand. From this contradiction how are we to extricate ourselves? How solve the paradox, of two things, each depending upon the other? * * *

"Meaning by the word demand, the quantity demanded, and remembering that this is not a fixed quantity, but in general varies according to the value, let us suppose that the demand at some particular time exceeds the supply, that is there are persons ready to buy, at the market value, a greater quantity than is offered for sale. Competition takes place on the side of the buyers, and the value rises: but how much? In the ratio (*some may suppose*) of the deficiency: if the demand exceeds the supply by one-third, the value rises one-third. By no means: for when the value has risen one-third, the demand may still exceed the supply; there may even at that higher value, be a greater quantity wanted than is to be had; and the competition of buyers may still continue. If the article is a necessary of life, which, rather than resign, people are willing to pay for at any price, a deficiency of one-third may raise the price to double, triple, or quadruple. Or, on the contrary, the competition may cease before the value has risen in even the proportion of the deficiency. A rise, short of one-third, may place the article beyond the means, or beyond the inclinations, of purchasers to the full amount. At what point, then, will the rise be arrested? At the point, whatever it be, which equalizes the demand and the supply: at the price which cuts off the extra third from the demand, or brings forward additional sellers sufficient to supply it. When, in either of these ways, or by a combination of both, the demand becomes equal and no more than equal to the supply, the rise of value will stop."

Mr. Mill then examines the converse case in which the supply exceeds the demand, and shews how they are equalized.

"*Thus we see that the idea of a* RATIO *as between demand and supply, is out of place*, and has no concern in the matter: *the proper mathematical analogy is that of an* EQUATION (!). Demand and supply, the quantity demanded and the quantity supplied will be made equal. If unequal at any moment, competition equalizes them, and the manner in which this is done is by an adjustment of the value. If the demand increases, the value rises; if the demand diminishes, the value falls: again, if the

supply falls off, the value rises; and falls if the supply is increased. The rise or fall continues until the demand and supply are again equal to one another: and the value which a commodity will bring in any market, is no other than the value which, in that market, gives a demand just sufficient to carry off the existing or expected supply."

This extract from Mr. Mill gives fairly enough an account how demand and supply are adjusted. The substitution of the word *Equation* for *Ratio* has often been alleged as a great discovery. Mr. Mill has himself brought it forward in other publications; and yet it is very surprising that so acute a thinker should not have perceived, what any intelligent schoolboy could tell him, that an Equation is a Ratio! A Ratio is the relation which one quantity bears to another in respect to magnitude. If the two quantities are equal, it is a Ratio of Equality, or an Equation. Hence the *Law* of Demand and Supply, the *Ratio* of Demand and Supply, and the *Equation* of Demand and Supply are absolutely identical expressions; and this alleged discovery of Mr. Mill's is a pure mare's nest.

39. Mr. Mill fully adopts Ricardo's classification of commodities, and the laws which he proposes for them; but he says[1] that it is necessary to take notice of certain cases to which from their peculiar nature, this law of exchange value is inapplicable. He cites as an example the case of two different commodities having a joint cost of production; being both products of the same operation; and the same outlay would have to be incurred for either of the two, if the other were not wanted at all. As, for instance, coke and coal-gas are both produced from the same material, and by the same operation: so also, mutton and wool; beef, hides, and tallow; calves and dairy produce; chickens and eggs; cost of production, he says, "can have nothing to do with deciding the value of the associated commodities relatively to each other, it only decides their joint value. The gas and the coke together have to repay the expenses of their production, with their ordinary profit." But how much of the remuneration of the producer shall be derived from the coke, and how much from the gas remains to be decided. Cost of production does not determine their prices, but the sum of

[1] *Book* iii., *ch.* 16, *s.* 1.

their prices. A principle is wanting to apportion the expenses of production between the two.

"Since cost of production here fails us, we must revert to a law of value *anterior to cost of production, and more fundamental, the law of demand and supply.*"

So here we have it acknowledged that the Law of Demand and Supply is more fundamental than that of cost of production, which at once annihilates the false distinction made by Ricardo and Mr. Mill between the two classes of cases.

Mr. Mill says a little afterwards—"This theorem is not in itself of any great importance: but the illustration it affords of the law of Demand, *and of the mode in which, when cost of production fails to be applicable, the other principle steps in to supply the vacancy* (*l*) is worthy of particular attention, as we shall find in the next chapter but one that something very similar takes place in cases of much greater moment."

Now, this mode of arguing in Economics is just as rational and as admissible as it would be to say in Astronomy "in this class of cases the Ptolemaic Theory fails us, and we must adopt the other, or Copernican Theory, to supply the vacancy:" or in Optics to say "in this class of cases the Corpuscular Theory fails us, and we must adopt the Wave Theory to supply the vacancy." The obvious analogy of Natural Philosophy shews that if a Theory fails in any one case whatever, it fails in all.

After alluding to the cause of agricultural produce, Mr. Mill says—"There would be little difficulty in finding *other anomalous cases of value*, which it might be a useful exercise to resolve." Now an "anomalous case" is a case without a law; and we utterly deny that there are any such cases at all. There are no anomalous cases in physical science; though it may be that the inquirer cannot see the Law. When the early Algebraists, using general symbols, came upon Negative Roots of Equations, not at first understanding what they meant, they called them *Fictitious Roots* (*fictæ radices*); so when in the process of operations the Roots of Negative Quantities appeared, not being able to imagine what such quantities could possibly mean, they called them *Imaginary* or *Impossible* Quantities. But every advanced schoolboy now understands perfectly well what Negative and Imaginary Quantities are. Now to say that there are

"anomalous" cases of Value, is to say that there are phenomena without a Law; a doctrine which is entirely inadmissible.

40. Mr. Mill afterwards comes to the case which he alluded to in the extract given above, and it is impossible to imagine a more glaring instance of the breach of the *Law of Continuity*, and of the principle of the *Continuity of Science*. He says[1]— The values of commodities produced at the same place, or in places sufficiently adjacent for capital to move freely between them,—let us say for simplicity, of commodities produced in the same country—depend (temporary fluctuations apart) upon their cost of production. But the value of a commodity brought from a distant place, especially from a foreign country, does not depend on its cost of production in the place from whence it comes. On what then does it depend? The value of a thing in any place, depends on the cost of its acquisition in that place; which in the case of an imported article, means the cost of production of the thing which is exported to pay for it.

"Since all trade is in reality barter, money being a mere instrument for exchanging things against one another, we will, for simplicity, begin by supposing the international trade to be in form, what it always is in reality, an actual trucking of one commodity against another. As far as we have hitherto proceeded, we have found all the laws of interchange to be essentially the same, whether money is used or not; money never governing, but always obeying these general laws.

"If, then, England imports wine from Spain, giving for every pipe of wine a bale of cloth, the exchange value of a pipe of wine in England will not depend upon what the production of the wine may have cost in Spain, but upon what the production of the cloth has cost in England. Though the wine may have cost in Spain the equivalent of only ten days labour, yet, if the cloth costs in England twenty days labour, the wine when brought to England, will exchange for the produce of twenty days English labour, *plus* the cost of carriage; including the usual profit on the importer's capital during the time it is locked up, and withheld from other employment.

"The value, then, in any country, of a foreign commodity depends on the quantity of home produce which must be given

[1] *Bk.* iii., *ch.* 18, *of International Values.*

to the foreign country in exchange for it. In other words the values of foreign commodities depend on the terms of international exchange. What, then, do these depend upon? What is it, which, in the case supposed, causes a pipe of wine from Spain to be exchanged with England for exactly that quantity of cloth? *We have seen that it is not their cost of production.* If the cloth and the wine were both made in Spain, they would exchange at their cost of production in Spain; if they were both made in England, they would exchange at their cost of production in England: but all the cloth being made in England, and all the wine in Spain, they are in circumstances to which we have already determined that the law of cost of production is not applicable. *We must accordingly, as we have done before in a similar embarrassment, fall back upon an antecedent law, that of supply and demand: and in this we shall again find the solution of our difficulty.*"

The consideration of this example will at once shew the fallacy of the whole of Mr. Mill's system. For he says that the values of commodities produced at places *near* each other are governed by cost of production, but the values of those produced at *distant* places, and in *foreign* countries, are governed by the Law of Demand and Supply. Now, let us suppose that the commodities are produced in places which are at a gradually and continuously increasing distance from each other. When do the places cease to be *near* each other, and when do they become *distant* from each other? At what point does the Law of Cost of Production change into the Law of Demand and Supply? This mode of argument is an exact parallel to, and as flagrant a breach of the Law of Continuity, as the Aristotelian doctrine of the Laws of Motion quoted in page 42. Still more extraordinary is it, if possible, to suppose that the Laws of Value can change according as countries are foreign to each other, or not. England and Scotland were once foreign countries to each other; and, then, according to Mr. Mill, the values of commodities produced in them respectively and exchanged, were governed by the Law of Demand and Supply; but when England and Scotland were united into one country, the values of the same commodities were then immediately governed by the Law of Cost of Production! So that the very day and instant the Act of Union came into effect, the Laws of

Value between the two countries underwent a fundamental change! Certainly this was an effect of the Union which no one ever suspected before. Formerly, Savoy was part of Sardinia, and a foreign country to France: the values of commodities exchanged between them were governed by the Law of Demand and Supply: Savoy was then united to France, and at that very instant, the Law of Value between them changed into Cost of Production! England and France are now foreign countries to each other. The values of commodities produced in them now are governed by the Law of Demand and Supply; but if France and England were once more united, then these values would be at once governed by the Law of Cost of Production! Until very recently Italy was parcelled out into a number of separate and independent States. They were foreign countries to each other: and therefore the Values of commodities exchanged between them were governed by the Law of Demand and Supply. But Italy is happily now united, and become one country. Values in it are now, therefore governed by Cost of Production! That is to say, the unification of Italy has caused a fundamental change in the Law of Value! It would be just as rational to say that the unification of Italy has caused a fundamental change in the Law of Gravity. The slightest consideration will show that such fantastic notions cannot be accepted as sound philosophy; but that the fundamental Laws of Value must be the same, whether the places of production be near to, or distant from, each other; whether situated in the same, or in foreign, countries.

41. The fundamental objection to the whole of the Ricardo-Mill system of Political Economy must now be apparent to any one conversant with the most ordinary principles of Natural Philosophy. Any one acquainted with the methods of investigation pursued in Physical Science since the days of Galileo, must know that there can be but ONE General Theory at the basis of every science. For if the science is broken up into many classes of phenomena, each governed by a different Theory, how is it possible to *generalize* in such a science? In different physical sciences there have been severe and protracted controversies as to which was the true Theory, but no one ever supposed that there could be more than one. Who ever heard of

any one writing a treatise on Astronomy and maintaining that one class of Astronomical Phenomena were to be explained on the Ptolemaic Theory, another class on the Copernican Theory, and another class on Tycho Brahe's Theory? Who ever heard of any one writing a treatise on Optics, and maintaining that one class of Optical phenomena are to be explained by the Corpuscular Theory, another class of phenomena by the Wave Theory, and other classes by other theories? Would not such a method of treating Astronomy and Optics be universally scouted by every Physical Philosopher? And yet this is exactly the method followed by Ricardo and Mr. Mill in Economics! Mr. Mill says [1]—"This, then, is the Law of Value with respect to all commodities not susceptible of being multiplied at pleasure. Such commodities no doubt are *exceptions* (!) There is *another Law* (!) for that much larger class of things which admit of indefinite multiplication. But it is not the less necessary to conceive distinctly and grasp firmly *the theory of this exceptional case* (!!) In the first place it will be found to be of great assistance in rendering the common case more intelligible. And in the next place, the principle of the exception stretches wider, and embraces more cases than might at first be supposed."

Now this Law which Mr. Mill treats as accounting for this exceptional case, by his own admission, governs the Value of Labour [2]—the rate of discount,[3] or the Value of Money and Credit—the whole Foreign trade of the country [4]—and the value of all other commodities at any particular time.[5] He afterwards considers [6] some "peculiar cases" of value and says "there would be little difficulty in finding other 'anomalous cases' cases of value." Now if, according to Mr. Mill, the whole phenomena of Economics are made up of "exceptional cases," "peculiar cases," and "anomalous cases," what remains for the general body of the science? Absolutely nothing!

So Mr. Carey after maintaining as a fundamental dogma that Labour is the sole cause of value says—"Pearls may be found by those who do not seek them, and meteoric iron may be a gift to those who little anticipate its reception, while others may seek for pearls, or dig for iron, without profitable results. These are accidents which do not, in the slightest degree, militate

[1] *Book* iii., *ch.* 2, § 4.
[2] *Book* iii., *ch.* 2, § 5.
[3] *Book* iii., *ch.* 23.
[4] *Book* iii.. *ch*, 18,
[5] *Book* iii., *ch.* 3, § 1.
[6] *Book* iii., *ch.* 16.

against the assertion that all value is the result of labour. Nine hundred and ninety-nine out of every one thousand parts of those annually created are so, and the exceptions are too slight to be deserving of consideration. They are just sufficiently numerous to prove the rule ! !"

Now, leaving out of consideration that not the hundredth part of things of value have any labour associated with them at all, such methods of treating a science are simply a burlesque on science. They shew either that the writers are utterly ignorant of the commonest principles of Natural Philosophy, or that they are not in earnest in writing on Economics.

Any scientific person, therefore, who had no special knowledge of Economical subjects, but who was simply informed of the *method* of reasoning adopted, would instantly condemn it.

Ricardo and his followers break up Economic phenomena into several distinct classes of cases, and they assert that there is a distinct fundamental law of value for each. Their object is to discover where the values of things will *rest*. It may be said that the whole spirit of the Ricardian school of Economists is to treat it as a *Statical* science. But this is a most manifest fundamental error, and it was clearly seen by an eminent philosopher who never devoted himself specially to the subject. Sir John Herschel says[1] "One great source of error and mistake in Political Economy consists in *persisting to regard its problems as* STATICAL *rather than* DYNAMICAL *in their character*."

Sir John Herschel has exactly described the fundamental defect of the whole Ricardo-Mill system of Political Economy. It is quite clear that Economics is a DYNAMICAL, and not a STATICAL, Science. The relations of Exchangeable Quantities are in a state of perpetual variation, and the great problem of the science is to discover the single General Law of these variations.

That this is the true problem in the science was clearly seen by Francis Horner, who says in some letters to Sir James Mackintosh[2]—"The theory of prices and their variations is the darkest part of our system. . . . A statist does nothing for philosophical economy unless he ascertains and describes

[1] *Discourses: Review of Quetelet on Probabilities, p.* 435.
[2] *Memoirs of Francis Horner. Chambers's Edit., pp.* 154-5.

changes, and such *relations* among his details as are matter of fact."

Now this is exactly the fundamental difference between Ricardo and Condillac, who were both agreed as to its general nature. Ricardo treats it statically, but Condillac treats it dynamically: he discusses the variations of values, and shews that they are reducible to a single general Law.

Condillac, therefore, is the true founder of the dynamical system of Economics, and no one versed in Natural Philosophy, can have a moment's doubt that it is the true one; and it is the one to which the majority of modern Economists are rapidly gravitating. The fundamental defect of Condillac is that like the Physiocrates, he confines his inquiries to the material products of the earth, whereas in this work we bring ALL Exchangeable Quantities of whatever nature under the same General Law.

The same distinguished philosopher whom we have already cited as condemning the Ricardian system of Economics, says[1]— "In the foregoing pages we have endeavoured to explain the spirit of the methods to which, since the revival of philosophy, natural science has been indebted for the great and splendid advances it has made. What we have all along most earnestly desired to impress on the student is, that natural philosophy is essentially united in all its departments, *through all which* ONE SPIRIT REIGNS, AND ONE METHOD OF INQUIRY APPLIES." And we have seen above[2] that Mr. Mill himself says—"that the backward state of the Moral Sciences can only be remedied by applying to them the methods of Physical Science duly extended and generalized," Now this is exactly the standard by which we judge the Ricardo-Mill system of Economics. The question involved in the acceptance or rejection of its system is no slight one—Ricardo and Modern Science cannot stand together. If we are to receive Ricardo and his school, Bacon has written in vain, and the Continuity of the Sciences which he was the first to inculcate, and so many eminent men have adopted and sanctioned since, is utterly broken. If the Ricardo-Mill system of Economics be true, all Physical and Mathematical Science is shaken to its foundations: for here is a new order of Variable Quantities treated in a manner utterly repugnant to the General

[1] *Discourse on the Study of Natural Philosophy*, *p.* 219. [2] *p.* 19.

Theory of Variable Quantities. If then we are to believe in Ricardo and Mill, we must sweep away the whole of modern science since the days of Galileo, and go back to the physics of Aristotle: for the method of Ricardo and Mill is the worst method of the Aristotelian Mechanics protruding itself into the latter half of the nineteenth century. But our duty in the future parts of this work will be to sweep away and annihilate all these false distinctions, and to shew, in strict accordance with the Principle of the Continuity of the Sciences, the Law of Continuity, and the whole of modern Inductive Science, that there is but one general Law of Value for all Economic Quantities in all ages and in all countries: and thus by reverently following the precepts of the mighty prophet of Inductive Philosophy, and the example of the immortal creators of the various Inductive Sciences, by generalizing its Fundamental Conceptions and axioms, it will be seen that Economics, a Moral Science, is fitted to take rank, by the side of Mechanics and Optics, as a great "POSITIVE" INDUCTIVE SCIENCE.

CHAPTER VI.

THE THEORY OF THE COINAGE.

MEANING OF BULLION—COIN—MINT PRICE AND MARKET PRICE—WHAT IS A POUND?—ON A DOUBLE STANDARD —ON A SEIGNORAGE—OF A DECIMAL COINAGE.

1. Having in the preceding chapters completed the Inductive, or Theoretical, portion of Economics, that is the ascertainment of its General Conceptions and its General Law, or General Equation, we now enter upon the Deductive, or Practical portion, or the application of the conceptions and principles we have investigated Inductively, to the explanation of Economic phenomena. Economics is the Theory of Value in general; but universal custom has found the convenience of expressing all values in terms of one medium, viz:—Money or Credit. It seems therefore the natural order of the subject to commence the Deductive branch of the subject by investigating the Theory of Money and Credit. In this chapter, therefore, we shall investigate the Theory of the Coinage, and in the following one we shall investigate the Theory of Credit, which in this and many other countries has largely replaced money as a medium of exchange.

2. Most nations, even the rudest, have felt the advantage of employing some substance to perform the functions of a currency. We have noticed, in a former chapter, most of the substances which have been used for this purpose by different nations. A metal, however, of some sort has been found to possess the greatest advantages, and of these, gold, silver, and copper, have been chiefly preferred.

Gold and silver, however, in a perfectly pure state, are too soft to be used for this purpose, and it is necessary to mix some other metal with them to harden them, which is called alloy. By a chemical law, whenever two metals are mixed together, the compound is harder than either of them in a pure state.

When gold and silver are in the mass, they are called BULLION, which, of course, may be of different degrees of fineness. But as the laws of all countries in which bullion is coined into money define the quantity of alloy to be mixed with the pure metal, we shall use the word Bullion to mean gold, or silver, in the mass, mixed with such a proportion of alloy as is ordered by law, so as to be fit to be coined.

3. In England, standard gold bullion is made in the proportion of 11 parts of pure metal to 1 part of alloy. Silver bullion contains 11 ozs., 2 dwts., or 222 dwts. of pure silver to 18 dwts. of alloy. This standard has been used in this country from the reign of William the Conqueror to the present time, with the exception of a very short period of confusion from the 34th Henry VIII. to Elizabeth. It is called the "Old right standard of England" or Sterling; and as the Sovereigns of England, though they sometimes reduced the weight of the coin, never with the slight exception just mentioned, tampered with the quality of the metal, sterling came to signify honest and true, or to be depended upon.

The purity of gold is measured by 24th parts, called *Carats*. Since the 6th Edward VI. the bullion used in England for making money is 22 carats fine, or one twelfth alloy. This is called *Crown Gold*.

In France and those countries which have adopted a decimal coinage, bullion is made of 9 parts fine metal and 1 part alloy; but it is found in practice that the English proportion gives greater durability to the metal, and therefore is better for coinage.

4. Some nations have used Bullion as a circulating medium; but the merchants of those nations were obliged to carry about with them scales and weights to weigh out the bullion on each occasion. This was usual among the Jews. In some countries it is necessary both to weigh and assay the bullion at each operation, which, of course, is a great impediment to commerce.

Other nations adopt a more convenient practice. They divide the bullion into pieces of a certain definite weight, and affix some public stamp upon it to certify to the public that these

pieces are of a certain fixed weight and fineness, and they give them certain names, by which they are commonly known.

These pieces of bullion, with a public stamp upon them to certify their weight and fineness, and called by a publicly-recognized name, and intended to be used for the purposes of commerce without further examination, are called COINS.

5. When nations discontinued the practice of direct barter, and adopted the precious metals as a measure of value, the expedient of cutting the metal into pieces of definite weight and fineness seems so obvious, that we should naturally expect that coining was invented by those nations which first adopted the precious metals as money.

Strange as it may appear, however, it is certain that this was not the case. Silver and gold were used as measures of value for ages before coining was thought of; and there is every reason to believe that coining was invented by a people who, up to the time of inventing it, did not use silver and gold as money; and coining was practised by them for centuries before it was introduced among nations who had used the precious metals as money for ages.

It has, indeed been disputed whether money, or coin, was in use in Homer's day, some contending that coins were meant in some passages which are so well known that we need not quote them. But all critics of authority are now, we believe, agreed that there is no allusion to money either in Homer or Hesiod. We ourselves, having gone over the Iliad for the express purpose, are satisfied that there is not the faintest allusion to anything like money in it.

Not only do we find no allusion to money in Homer, but the words significative of wealth give no preference to the precious metals above other things; on the contrary, they are comparatively seldom mentioned. The Homeric words expressive of wealth most frequently refer to cattle, or horses, or agriculture. Thus we have *πολύρρην*, *πολυβούτης*, *πολύϊππος*, *φιλοκτέανος*, *πολυπάμων*, *ἄφνειος*, *πολυκτήμων*, *πολυλήϊος*. In *Iliad* vii. 180, and xi. 46, are almost the only instances in which gold is especially alluded to as wealth, *πολυχρύσοιο Μυκήνης*. When the Greek and Trojan leaders send spies to discover the plans of the enemy, neither of them promises money as a reward.

Nestor, *Iliad* x., 215, promises to the successful spy a black ewe with its young, a matchless gift; and Hector x., 305, promises on his side a chariot and a pair of horses.

6. The Homeric poems were probably written, according to the best authorities, about the beginning of the ninth century, B.C. At that period, therefore, we have seen that there was no money of any sort in Greece, nor even were gold and silver used as measures of value. But soon after this, though how long we cannot say, a currency of a curious nature came into use throughout Greece. They used large iron and copper nails, called ὀβελίσκοι, of such a size that six of them made a handful, and when silver was substituted, the standard silver coin of the Greeks derived its name from the fact that it was of the value of a handful of these nails. They are mentioned by Plutarch in his life of Lysander, § 17. He says that Lysander sent a quantity of gold and silver money to Sparta, by Gylippus, who stole a part of it, and this being discovered, made the chief Spartans demand that all the gold and silver should be sent away as a foreign nuisance, and that they should use nothing but their own national coin, which was, of iron, and tempered with vinegar, so as to render it useless for any other purpose. And he says—"Probably all the money in former times was of this kind, for they used iron skewers as money, and some used copper ones. Whence it comes that even now a quantity of small coin is called *obolus*, and a *drachma* is six oboli, because the hand can grasp that number." We shall see below that Pheidon, who introduced a silver coinage into Greece, collected a number of these skewers, and laid them up in the Temple of Juno, at Argos, as a curiosity.

7. Although Pollux says that the invention of coining was by different writers attributed to four different persons, or peoples, the claimants for this honour are practically but two—Pheidon of Argos, and the Lydians. The majority of ancient authorities attribute it to Pheidon, king of Argos. Thus the historian, Ephorus, is quoted in two places by Strabo. In VIII., 6, he says,

"'Εφορος ἐν Αἰγίνῃ ἄργυρον πρῶτον κοπῆναί φησιν ὑπὸ Φείδωνος. Ἐμπόρειον γὰρ γενέσθαι παρὰ τὴν λυπρότητα τῆς χώρας τῶν ἀνθρώπων θαλαττουργούντων ἐμπορικῶς."

"*Ephorus says that silver was first coined in Ægina by Pheidon. For the Island became a commercial port, as the inhabitants were obliged to betake themselves to maritime commerce, in consequence of the sterility of the land.*" *Also in* VIII., 3:—

"Καὶ μέτρα ἐξεῦρε τὰ Φειδώνεια καλούμενα, καὶ σταθμοὺς, καὶ νόμισμα κεχαραγμένον τό τε ἄλλο καὶ τὸ ἀργυροῦν."

"*And he invented the measures, called the Pheidonian ones, and weights, and coined money of silver, and other kinds.*"

The *Etymologicum Magnum*, under the title Ὀβελίσκος, says—

"Πάντων δὲ πρῶτος Φείδων Ἀργεῖος νόμισμα ἔκοψεν ἐν Αἰγίνῃ, καὶ δοὺς τὸ νόμισμα καὶ ἀναλάβων τοὺς ὀβελίσκους, ἀνέθηκε τῇ ἐν Ἄργει Ἥρᾳ."

"*And Pheidon of Argos was the first who ever coined money, which he did at Ægina, and he both put money into circulation, and withdrew the skewers, and laid them up in the temple of Juno at Argos.*"

And in accordance with this, Ælian says, *Var. Hist. XII.*, 10. *De Æginetis:*—

"Καὶ πρῶτοι νόμισμα ἐκόψαντο, καὶ ἐξ αὐτῶν ἐκλήθη νόμισμα Αἰγιναῖον."

"*And they were the first who coined money, which, too, is from them called Æginæan money.*"

So also the Parian Marble says, *Clinton's Fast. Hellen. I.* 247:—

"Ἀφ οὗ Φ . . δων ὁ Ἀργεῖος ἐδήμευς . . . . ε . . . . νεσκεύασε, καὶ νόμισμα ἀργυροῦν ἐν Αἰγίνῃ ἐποίησεν."

All these authorities, therefore, are perfectly clear that Pheidon of Argos was the first who coined money, which he did at Ægina; and the reason why he set up his mint at Ægina, is very plainly given by Ephorus, as quoted above, because it was a great commercial port, and, therefore, it was most wanted there for the convenience of commerce.

The period at which Pheidon lived has been a subject of much dispute. For while some carry it back so far as 865, B.C., others bring it down to 783-744, B.C. The question is fully discussed in the first Appendix to the first Volume of Mr. Clinton's *Fasti Hellenici;* and in his opinion, the latter is

the true date. And in this decision all scholars now acquiesce. We may, therefore, place the introduction of coined money by Pheidon in the first half of the 8th century, B.C. And there is a very probable reason why he should have invented it. At this period he was by far the most powerful sovereign in Greece. Argos was the metropolis not only of the Peloponnesian Dorians, but also of the Asiatic Dorian colonies. The Dorians carried on a very large commerce with the Phœnicians, and it was from them that Pheidon adopted his system of weights. From time immemorial there had been two standard weights used in Assyria, the Babylonian and the Euboic talent. The Dorians traded with the Phœnicians, and adopted the Babylonian talent. The Ionic Greeks adopted the Euboic talent. As Ægina was the great commercial depôt, this talent was afterwards called the Æginæan talent. The Assyrians at this period had no coinage. And Pheidon introducing the system of Babylonian weights into Greece, seems to have invented a system of measures of his own, which were called after him, and also a silver coinage, to supersede the clumsy iron and copper nails, or skewers, then used as currency. The Spartans, however, who at this period were a subordinate, but independent tribe of Dorians, steadily refused the new invention of a silver coinage, probably from jealousy, and adhered to the old iron skewers. They retained this iron money to a comparatively recent period.

8. The account of the invention of coinage just given, seems to be natural and probable. There is, however, a passage in Herodotus which seems to contradict it. He says, I., 94, speaking of the Lydians,

"Πρῶτοι δὲ ἀνθρώπων, τῶν ἡμεῖς ἴδμεν, νόμισμα χρυσοῦ καὶ ἀργύρου κοψάμενοι ἐχρήσαντο."

"*And they were the first men, we know of, who coined and used gold and silver money.*"

This has always been supposed to mean that the Lydians were the first who invented coining, and that they used a double standard, as it is called, of gold coins and silver coins. If this be the case, the authority of Herodotus is against the claim of Pheidon, and though it is somewhat singular that Julius Pollux does not mention this passage, he says that Xenophanes of Colophon assigns the invention to them.

It occurs to us, however, that there may be a means of reconciling the apparent contradiction between Herodotus, and the writers already cited as attributing it to Pheidon. It seems to us that the passage will bear a different construction from that invariably put upon it. For in Greek when καὶ is used to connect two qualities, it means that the thing spoken of partakes of *both* these qualities at once. Thus, as the month began in the middle of a day, the last day of a month was called ἕνη καὶ νέα the new-and-old day, because it belonged partly to one month, and partly to another. So there are many other examples. Now if we apply this principle to the passage in question, it would mean not that the Lydians were the first to coin gold money and silver money in separate coins, but that they were the first who struck a coinage of a MIXTURE *of gold and silver.*

Now we find that this rendering of the passage, which is the genuine Greek idiom, exactly tallies with the fact. The Lydians had a coinage of ἤλεκτρον, or electrum, which is a *mixture* of gold and silver, in different proportions, but usually three parts of gold to one part of silver. And this material was generally adopted throughout the western states of Asia Minor for their coins.[1] Several of these coins are in the British Museum.

Such is the solution of this apparent contradiction, which we offer to our readers for them to consider its probability. We offer it with the greatest diffidence, because it seems to us that if it be the true solution, it is so simple and obvious that it could hardly have escaped the notice of the many able and acute critics and writers, both on Herodotus and Numismatics.[2]

9. It may almost appear superfluous to remark that this stamp, or certificate, in no way effects the value of the metal, or the

[1] *Encyclo. Brit., Art. Numismatics.*

[2] Since this view, which is not given by any German or English edition of Herodotus that we have seen, was published in our *Dictionary of Political Economy, Art. Coinage,* we have submitted it to two distinguished scholars who have given it their approval. Mr. Reginald Stuart Poole of the Numismatical Department of the British Museum, and author of the article *Numismatics* in the *Encyclopædia Britannica,* gave it his unhesitating approval, and said that if he had known of it sooner, he would have introduced it into his article on *Numismatics.* Dr. Reichel, also, Vicar of Mullingar, formerly Professor of Latin in Queen's College, Belfast, one of the most distinguished scholars and ornaments of the Irish Church, also expressed to us his approval of it: we have therefore the greater confidence that it is right.

quantity of things it will exchange for. Its only object is to save the trouble of weighing and assaying the bullion in commercial transactions. Nor can the *name* of the coin in any way affect its *value*. Values, it is true, are estimated in the number of these pieces of bullion, or coins, but it is perfectly clear that it is necessarily implied in the bargain that these coins shall contain a certain definite quantity of bullion.

Nevertheless, although this seems so perfectly clear, it is a confusion on this point which is at the root of all the extravagances of the currency question, which have so long vexed the public ear. They almost all arise from confounding the *name*, or *denomination*, of a coin, with its *value*, its name with its purchasing power; and from supposing, that if the Legislature chose to call a *shilling* a *pound*, that therefore a shilling would have the value of a pound. Any one who will brand on his mind the simple principle, that although the stamp gives the coin currency, it is the weight of bullion alone which gives it value, will be able to steer his course safely through all the shoals and quicksands of monetary controversies.

We shall see, a little further on, that calling the reader's attention to these self-evident truths, is not so superfluous as it may appear at present.

It is also perfectly evident, that if this process of stamping bullion, and so turning it into coin, is done free of all expense, at the will of any one who chooses to present bullion, and demand to have it stamped, and also without any delay, the value of the metal as bullion must be exactly the same as the value of the metal as coin.

If, however, a charge is made for the workmanship, or if any tax is levied on changing the metal from one form into the other, or if a delay takes place in doing so, there will be a difference between the value of the metal as bullion and as coin, and this difference will manifestly be the charge for the workmanship, the amount of the tax, and the quantity of interest accruing during the period of delay.

These, however, are all fixed, or constant quantities, which may be ascertained, and they form the limits of the variation of the metal in one form from its value in the other.

In the following remarks we shall assume that there is no charge for the workmanship of coining, no tax upon it and no

delay in doing it, no obstruction, in short, of any sort to changing the metal from one form to another.

If in any particular cases obstructions should occur, the necessary corrections must be made throughout the course of the following reasonings.

Upon the assumptions, then, above stated, we have this fundamental principle of the coinage:—

Any quantity of metal in the form of Bullion must be exactly of the same value as the same quantity of metal in the form of coin.

On the meaning of the MINT PRICE *and* MARKET PRICE *of Gold and Silver.*

10. As the very purpose of coining is to certify that the pieces of bullion are of a certain definite weight and fineness, it is evident that any fixed quantity of bullion, as a pound weight, must always be divided into a fixed number of coins.

The number of coins into which a given quantity of bullion is divided, is called the MINT PRICE *of that quantity of bullion.*

It is perfectly clear, then, that the Mint Price of Bullion is a fixed quantity; it can by no possibility vary, until the same quantity of bullion is coined into a different number of coins.

To alter the Mint Price of Bullion is merely an expression which means an alteration in the standard weight of the Coinage.

To suppose that the Mint Price of Bullion could vary is manifestly as great an error as to suppose that a hundred-weight of sugar can be a different weight from 112 separate pounds weight of sugar: or that any quantity of wine in a hogshead could be different in quantity from the same quantity of wine in bottles: or that a loaf of bread could alter its weight by being cut up into slices.

Until recent times, when more attention has been paid to the state of the coinage, these coins might circulate for a considerable time in a country, and lose much of their weight, without losing their value. People were so accustomed to attach a certain value to the sight of a particular coin that, unless they were money dealers, they did not stop to inquire too curiously whether it was of exactly of the proper weight or not. In fact, when a coinage has been some time in use, few people know what

the legal weights of the coins are. Many, for instance, do not associate the idea of a pound with any particular weight of bullion, and thus, in exchange for commodities and services, coins may pass at their nominal value for a considerable time after they have lost much of their weight. Thus Shakespeare says[1]

> "'Tween man and man, they weigh not every stamp,
> Though light, take pieces for the figure's sake."

When coin has been some time in circulation, it must necessarily lose much of its weight from the wear and tear of circulation, even if it be not subjected to any bad practices, such as clipping, which used to proceed to a great extent in this country formerly, as will be shewn a little further on. So late as 1816, when the last great reformation of the coinage took place in England, the greater part of the metallic circulating medium was nothing but a thin wafer of silver, from which all traces of an impression had long since vanished, and it was reduced to scarcely more than half its legal weight.

Coins might circulate in a country for some time after they had lost some of their weight, without any perceptible change in their value with respect to ordinary commerce, but when they were given in exchange for bullion the case would be different. As the value of bullion is measured weight for weight with the coins, it is clear that if the coins have lost their weight, a greater number of them must be given to purchase any amount of bullion than if they are of full weight. Thus, if the Mint Price of silver bullion be 5s. 2d. per ounce, or if that be the quantity of coin into which an ounce of silver bullion is cut, then, if the coins have lost their proper weight from any cause, it is clear that more than 5s. 2d. must be given to purchase an ounce of bullion. It may perhaps require 6s., or even more, to buy an ounce of bullion.

Now, the quantity of coin at its full legal weight, which is equal to a given weight of bullion, is called its MINT PRICE, but the quantity of the current coin which is equal to it in weight is called the MARKET PRICE; and as if the coins are diminished in weight, more of them must be given than if they are of full weight, the *Market Price* will apparently be higher than the *Mint Price*, and this is called *a rise of the Market Price above the Mint Price.*

[1] *Cymbeline, Act* v., *Sc.* iv.

This expression, however, has given rise to much error. The plain meaning of it clearly is, that six of the current coins are only equal to what 5s. 2d. ought to be, which merely means, that the current coinage is deficient by 1-6th of its legal weight. Thus, in reality, we see that it is perfectly clear that the rise of the Market Price is due to the DEPRECIATION of the coinage.

Hence we obtain this fundamental law of the coinage—

When the Market Price of Bullion rises above the Mint Price, the excess is the proof and the measure of the depreciation of the coinage.

In fact, this apparent rise of the Market Price is due to just the same cause as has made the Mint Price of Silver bullion apparently rise from £1 in the days of William the Conqueror, to £3 2s. in the present day. It is merely that the same quantity of bullion is cut into a greater number of pieces, and, consequently, each piece must be proportionally diminished in weight, or depreciated.

The Market price of bullion could never fall below the Mint Price, unless there was more bullion in the coins than there ought to be, and, of course, in such a case, the difference in the Market price below the Mint Price would be the proof and the measure of the excess of the coins above their legal weight.

11. If the coinage of a country fall into a degraded state, from long wear and tear, and a new coinage of full weight be issued, and allowed to circulate along with it, one of two effects must inevitably follow. Either those persons who have commodities to sell will make a difference in the nominal price of articles, according as they are paid in the full weighted or the degraded coin; that is, the degraded coin will be at a discount as compared to the heavy coin; or, if there be a law to prevent this, and to make both pass at the same value, bullion dealers will immediately collect all the full-weighted coins they can, and melt them down into bullion, or export them; so that the new coinage will quickly disappear from circulation.

If persons, in selling their goods, are paid in light coin, as they wish to secure a certain weight of bullion in exchange for them, they would, of course, require a larger number of the light pieces than of the heavy ones, so that prices would apparently rise if paid in light money. In such a state of things,

the prices of goods are, in a certain sense fictitious—a number of light pieces are presumed to have the same value as the same number of heavy ones. The weight of bullion given in exchange for commodities, is expressed in a greater number of figures than it ought to be, and, if the law prevents any difference being made between heavy and light pieces, the same number of heavy pieces will purchase no more. This is as great an anomaly in commerce, as it would be to say in arithmetic that three were equal to four. But the consequence is very plain. If four pieces of coin will only purchase as many commodities as three ought to do, no one will turn bullion into coin at so great a disadvantage. On the contrary, as bullion would diminish so much in value, it would be sent to other countries, where it would purchase a greater amount of commodities. During the degraded state of the coinage during the last century, the Market Price of silver always considerably exceeded the Mint Price. Adam Smith says that the Market Price of silver ranged from 5s. 4d. to 5s. 8d. an ounce before the re-coinage. And we find it stated in the second Report of the Lords' Committee of Secrecy in 1797, p. 257:—But as the Mint Price of silver bullion has been, during nearly the whole of the present century, considerably less that the Market Price of this precious metal, the silver bullion imported could not be converted in coin, but, having left a quantity sufficient for the use of our manufacturers, must have again been exported, and did not contribute in the smallest degree to augment the coin of this kingdom." Moreover, as every one would try to pay his debts in the cheapest medium, or at the least expense to himself, it is evident that he would always try to pay them in the worst coins in circulation, and he would either hoard the good coins, or send them to foreign countries.

If, while the Bank of England were subject to their present law of being compellable to pay notes in exchange for bullion, at their present rate, the Market Price of bullion were to rise above the Mint Price, it would, in a short time, be fatal to the Bank; for while their notes, which represent coin, would only buy a diminished quantity of bullion, they would be compellable to pay full weight for them, a process which would evidently exhaust their bullion, for nobody would be content to have Bank notes in his possession which would only pass for 15s. in the open market, when he could compel the Bank to give 20s. for it.

Such a state of things would, therefore, necessarily cause a run upon the Bank, which would not stop while any of its notes remained out, or until the value of the note was restored to par. It was such a state of things which compelled the Bank to stop payment in 1697, three years after it was founded. The Bank received all the worn and clipped coins at their full nominal value, and gave their notes in exchange for them; when the new coinage came out, they were called upon to pay these notes in the new coinage, which, of course, produced a great demand upon them, which compelled them to stop. And the same state of things was grievously felt about 1774, and is the true explanation of the difficulties mentioned by Adam Smith, which he attributes to over-issues by the Bank.

During Sir Robert Peel's administration, in 1844, the currency was beginning to exhibit symptoms of depreciation from its wear and tear. Owing to the effective measures taken by him, it is now almost universally of full weight, and the deficiency in most cases is so slight, that it is not observable in ordinary transactions. The Bank of England, however, warned by experience, weighs rigidly every single sovereign paid into by its customers, and does not credit them with more than its value as bullion. Other banks in London find it impossible to maintain the same strictness with their customers, so that, if they pay the money they receive in the course of their business into their account with the Bank of England, they generally incur some loss.

12. These considerations lead us to a fundamental and universal law in Economics, which has been found to be true in all countries and ages—*That bad money drives out good money from circulation;* or, as it is expressed in an anonymous pamphlet, *A reply to the Defence of the Bank, setting forth the unreasonableness of their slow payments.* LONDON, 1696.

"*When two sorts of coin are current in the same nation of like value by denomination, but not intrinsically, that which has the least value will be current, and the other as much as possible will be hoarded,*" or exported, we may add.

The fact of the disappearance of good coin in the presence of bad, was noticed by Aristophanes; and was long the puzzle of financiers and statesmen, who continued to issue good coin

from the Mint, and were greatly perplexed by its immediate disappearance, till Sir Thomas Gresham explained the cause, whence we have called it Gresham's Law of the Currency.

This law is of such fundamental importance in Economics, viz., *That good and bad coin cannot circulate together, but the bad coin will drive out the good*, that it may be interesting to quote the passage which contains the earliest notice, that we are aware of, of the phenomenon. During the extreme distress caused by the Peloponnesian war, Athens had for the first time issued a debased gold coinage; the consequence was that the good coin immediately disappeared from circulation. Aristophanes, *Frogs*, 765, says:—"The State has very often appeared to us to be placed in the same position towards the good and noble citizens as it is with regard to the old currency and the new gold; for we make no use at all, either at home or abroad, of those which are not adulterated, but the most beautiful of all money, as it would seem, which are alone well coined and ring properly, but of this base copper, struck only yesterday, and recently, of a most villainous stamp. And such of the citizens as we know to be well-born, and prudent, and honorable gentlemen, and educated in the palæstra, and chorus, and liberal knowledge, we insult. But the impudent and foreigners, and the base born, and the rascals, and the sons of rascals, and those most recently come, we employ." This law, thus first noticed by Aristophanes, has been found to be true in every age and country.

It is also from the same principle that a paper currency is invariably found to expel a metallic currency of the same denomination from circulation. And to show the generality of the principle, it was found in America that when a depreciated paper currency had driven coin out of circulation, and a still more depreciated paper currency was issued, the more depreciated paper drove out the less depreciated from circulation.

13. It may, perhaps, be worth while to advert to an error, which is by no means unfrequent. Some writers contend against *fixing* the price of gold, as it is called. It is now acknowledged by every one that it is a great Economical error to attempt to fix the price of any articles. Some writers contend that it is an equal error to *fix* the price of gold. But those who do so overlook a very important consideration. The word "price," except

in the single instance "Mint Price," always denotes the quantity of one article which is used as a measure which is given for another article of a *different* nature. Thus we say that the price of a bushel of corn is 6s., when the silver, the substance of which shillings are composed, is of a different nature from coin. But, in the expression *Mint Price* of bullion, it always means the value of bullion expressed in coin of the same metal. Thus the Mint Price of gold bullion means its price expressed in *gold* coin, and the Mint Price of silver bullion means its price expressed in *silver* coin.

These considerations shew that so long as the coins retain their full legal weight, the Market Price of bullion can by no possibility vary from its Mint Price. If the law requires an ounce of gold to be coined into £3 17s. 10½d., so long as the coins contain their proper weight, it can make no difference in the Market Price whether gold becomes as plentiful as iron, or as scarce as diamonds, for the money always continues of the same weight, whatever be the abundance or the scarcity of bullion. The value of gold may vary with respect to other things; it may purchase more or less bread, or meat, or clothes, or anything else at one time than another; but it is absolutely impossible that its value in bullion can differ from its value in coin. To suppose that it could, would be as irrational as to suppose that because bread became very abundant, or very scarce, a loaf of bread could differ from itself in weight when cut up into slices, or a cask of wine differ from itself drawn off into bottles.

14. As, however, gold and silver vary in value with respect to each other, and this variation may proceed, nominally at least, either from a dimunition in value of one metal, or from a depreciation of the coinage, we are enabled to devise a test by which to decide to which of these circumstances it is due. Thus, in the reign of William III., guineas rose to 28s. and 30s., and silver bullion rose at the same time to 7s. an ounce; one party stoutly contended that this was due to the scarcity of silver. Now, this argument was absurd on the face of it, because, if silver had been extremely scarce as compared to gold, it is perfectly clear that silver would have risen as compared to gold, and not fallen. That is, guineas would have sold for less than 28s. and not more. From the figures given above, this

argument was manifestly self-contradictory, because, as compared with gold, silver had apparently *fallen* in value, and as compared with silver money, it had apparently *risen* in value.

Now it is quite clear that a *dimunition in value* of the coin cannot be followed by any difference between the Market and the Mint Price of bullion. By the meaning of the words "Mint Price," however plentiful, or however scarce, gold may be, an ounce of it in coin must always be equal in value to an ounce of it in bullion. On the other hand, a *depreciation* of the coinage must inevitably be attended by a rise in the Market Price above the Mint Price of bullion, because, however plentiful or scarce gold is, three-quarters of an ounce of it in coin can never be equal in value to one ounce of it in bullion. The case may be shortly stated thus:—Guineas may rise to 25s. in silver, either from a *depreciation* of the silver coinage, or from a *diminution in value* of silver. What is the test? It is to be found in the Market Price of silver. If the silver coinage is debased, the Market Price of silver will rise above the Mint Price; if it is diminished in value, it will not.

The Mint Price of gold, therefore, in its modern meaning, is nothing more than a public declaration of the weight of metal the law requires to be in the coin, which accidental circumstances have caused to be considered as the legal measure of value in this country; and an alteration of the Mint Price of gold would be simply an alteration in the standard weight of the coin, and would be the same thing in principle as an alteration of the standard yard measure. Those persons who ridicule the idea of having the Mint Price of gold fixed, should, if they be consistent, also ridicule the idea of having the standard yard measure fixed. Those who wish to let the Mint Price of gold follow the Market Price, should also contend that every tradesman should have his yard measure of as many inches as he pleases, because when the Market Price of gold rises above the Mint Price, it is precisely analogous to curtailing so many inches of the yard. This fraudulent curtailment of the measure of value has never been done since Parliament has been the chief power in the Legislature. But it was constantly done in former times when the Crown was more despotic than it is now, so that the pound in the present day is curtailed of two-thirds of what it was in William I.'s time.

15. An alteration of the standard is a direct fraud upon debtors or creditors, according as it is raised or lowered; because the essence of every contract is, that the debtor is to pay a certain weight of gold, and not so many abstract ideas which are called pounds. Hence, if while any contract is incomplete, an alteration takes place in the weight of the coins, if, when it is fulfilled the debtor only looks to the number of pieces, neglecting their weight, it is evidently a fraud upon the creditor. Suppose a cloth manufacturer were under contract to deliver so many yards of cloth, and before the delivery took place, the law was to reduce the yard measure to 30 inches, surely the purchaser of the cloth would not be satisfied with reciving the same number of these diminished yards, simply because they were called "yards," as he bargained for. On the contrary he bargained for a definite *length* of cloth, and if, when the law diminished the yard to 30 inches, it is also declared that the cloth manufacturer had fulfilled his contract when he had delivered so many yards of this curtailed measure, it would be clearly a fraud upon the purchaser.

It is clear, however, that this fraud and injustice would only extend to existing contracts. If the law were to reduce the yard in that manner, all contracts made subsequently to that law would adapt themselves to it, and the injustice would be just the more severe in proportion to the number and amounts of contracts existing when the change took place. But suppose that, while the legal yard continued to be 36 inches, from the inattention of Government to send round proper inspectors of measures, tradesmen had become so fraudulent as to cut off gradually several inches from their yard measure, and suppose that this was done so openly and universally, that numerous contracts were entered into, in these measures, which were known by both parties to be below their legal length, so that contracts were subsisting that were made both in the proper measure and in the diminished measure. Now, suppose that the Government being suddenly roused from its inattention, determined to enforce the legal length of the yard measure, it might become a question of some perplexity to decide whether equity would be more satisfied by enforcing a general return to the original legal standard, or by lowering the legal standard to the average length of the yard in use.

In concluding this part, we need only observe that its prin-

ciples are, of course, subject to great modifications when obstacles are interposed to the conversion of bullion into coin. And that in several instances the value of bullion has differed immensely from the same quantity in coin. In the Eastern Archipelago, for instance, Spanish pillar dollars had long an almost exclusive currency. The people had such confidence in them, and were so accustomed to their use, that they would take nothing but them; and as, of course, they were only coined in Spain, when the supply of them was deficient in the East, bullion fell to an immense discount as compared with the dollars. The very same thing happened in the Australian Colonies soon after the gold discoveries, before mints were established there. Sovereigns could only be coined in England, and there were no means of converting the gold into currency without sending it to England to be coined. Gold, consequently, fell to an immense discount as compared with sovereigns. After some time, however, mints were erected in several of the colonies, and a plan was adopted of issuing notes in exchange for bullion, and this difference was immediately rectified.

What is a POUND?

16. In the currency discussions during the great war, many curious notions were started as to what a "Pound" is. Sir Robert Peel asked the question—"What is a Pound?"—and he found many who could give him no answer. There are a good many, we suspect, who do not know how a certain weight of gold bullion came to be called a "Pound." We shall now explain this.

The original measure of value in France, England, and Scotland, was the pound weight of Silver bullion. No coin, however, of this actual weight was ever struck. But the pound weight of bullion was divided into 240 coins called pence. Twelve of these pence were called a shilling, or solidus, and, therefore, twenty shillings, or solidi, made a pound. These 240 pence actually weighed a pound of bullion.

Now, let us denote the pound weight of metal in the form of bullion by the symbol—lb., and the pound weight of metal in the form of coin by the symbol – £. Then we have:—

240 pence = 20 shillings = 1 £ = 1 lb.

Now, it is perfectly clear that, if the pound weight of bullion were divided into a greater number of pieces than 240, that greater number would still be equal to the pound weight, and if we denoted by the symbol £, 240 pieces, or pence, irrespective of their weight, we should have the 1 lb. equal to 1 £, + the number of pieces above 240.

Now, this is what has been done in the coinage of all the three countries above-mentioned. The Sovereigns of these countries were frequently in want of money to pursue their various extravagances, and, as they could not make more money, they adopted the fraudulent and surreptitious plan of cutting the pound weight of bullion into a greater number of pieces, but they still called them by the same name. By this means they gained an illusory augmentation of wealth. As they could not multiply the quantity of the metal, they at various periods *falsified the certificate.* While they still called their coins by the same name, they diminished the quantity of bullion in them, and so coined more than the original number of pence out of a pound weight of bullion.

The consequence of this was very manifest. As 240 pence were still called *a pound* or £, in money, whatever their weight was, and as more than 240 pence were coined out of a pound of bullion, the £, or pound of money, began to vary from the lb., or pound of bullion. This falsification of the certificate increased till the time of Elizabeth, when, instead of 240 pence, or 20 shillings, being coined out of the pound weight of bullion, no less than 62 shillings, or 744 pence, were coined out of it. Then we have manifestly

744 pence = 62 shillings = £3 2s. = 1 lb.

Now, as there are 12 ounces in one pound weight of bullion, it is evident that each ounce of bullion was coined into 62 pence, and hence, as the value of bullion is measured by the ounce, the Mint Price of silver was said to be 5s. 2d. the ounce.

Afterwards gold was used as a measure of value concurrently with silver, and gold pieces were struck and made to pass current as nearly as could be done at the value corresponding to the market values of gold and silver. Thus there was for a considerable time a double standard.

The celebrated Locke, however, had pointed out that a double standard was improper, and that there ought to be only one

standard in a country. Sir Isaac Newton also pointed out in 1717, that the coins were then improperly rated according to the market value of gold and silver, and that the effect of this would necessarily be to drive silver out of circulation. In consequence of his representations, the value of the gold coin was reduced, but not to a sufficient extent, and the consequence which he predicted took place. In consequence of gold, in coin, being still overrated, in comparison with its relative market value to silver, merchants, during the course of the last century, adopted the universal custom of paying their bills in gold coin in preference to silver, and thus gold became gradually to be considered as *the* measure of value in England.

In 1816, this custom was adopted as the law, and gold was declared to be the only legal measure of value, and the pound, the legal tender, or measure of value, became the equivalent in gold of 20s. in silver.

The pound weight of gold bullion was ordered to be cut into 46 pieces of the value of 20s. or £1 each, with a piece over, equal to 14-20ths and 6-12ths of 1-20th, or the Mint Price of 1 lb. of gold was fixed at £46 14s. 6d.

But, as the value of gold is estimated by the ounce, the Mint Price of gold is fixed at £3 17s. 10½d. per ounce, and, as long as the coins are ordered to be coined of the same weight, the Mint Price cannot vary.

It would be out of place here to give a history of the Coinage of England and Scotland, but those who may feel an interest in the subject will find it in our *Dictionary of Political Economy*. But it is useful to have a table of the successive depreciations of the coinages of these countries to refer to, we therefore subjoin one. It will be seen that in England the silver coinage is depreciated to the extent of $\frac{36}{10}$ to 1, compared to what it was at the time of the Conquest.

In Scotland the last depreciation of the silver took place in 1738, when the lb. weight of silver bullion was coined into £37 4s. in money.

In France, the depreciation proceeded to greater lengths still. The extraordinary variations in the Mint Price of gold and silver are much too long to be inserted here, but they will be found in our *Dictionary, Art. Coinage of France*. It is sufficient to say that at the time of the Revolution the pound, or *livre*, had been reduced in weight to the modern *franc*, which was adopted as the basis of a Decimal Coinage.

Table showing the successive Depreciation of the Gold and to Silver, in England and Scotland,

ENGLAND.

	SILVER.			GOLD.			
A.D.	Fineness	Alloy.	Current Value, or Mint Price of 1 lb.	Fineness.	Alloy.	Current Value, or Mint Price of 1 lb.	Ratio of Gold to Silver.
	Oz. Dwt	Oz. Dwt.	£ s. d.	Crs. Grs.	Crs Grs.	£ s. d.	
1066	11 2	0 18	1 0 0	.....	.....	.....	1 to 9
1300	.....	.....	1 0 3	.....	.....	.....	„ „ 10
1344	.....	.....	1 2 2	23 3½	0 ½	15 0 0	„ „ 12 14844/20466
1345	.....	.....	.....	.....	.....	13 3 4	.....
1346	.....	.....	1 2 4	.....	.....	.....	„ „ 11 1637/2865
1347	.....	.....	1 3 3 In halfpence 1 3 5 In farthings	.....	.....	.....	.....
1347	.....	.....	1 2 6 In pence 1 3 3 In halfpence 1 3 5 In farthings	.....	.....	14 0 0	.....
1352	.....	.....	1 5 0	.....	.....	15 0 0	„ „ 11 151/955
1412	.....	.....	1 10 0	.....	.....	16 13 4	„ „ 10 190/573
1464	.....	.....	1 17 6	.....	.....	20 16 8	„ „ 11 151/955
1465	.....	.....	.....	.....	.....	22 10 0	.....
1526	.....	.....	2 5 0	23 3½ 22 0	0 ½ 2 0	27 0 0 25 2 6	„ „ 11 151/955 „ „ 11 50/230
1543	10 0	2 0	2 8 0	Debasement.	.....	.....	„ „ 10 10/23
1545	6 0	6 0	.....		.....	.....	„ „ 6 9/11
1546	4 0	8 0	.....		.....	.....	„ „ 5
1547	.....	.....	.....		.....	30 0 0	..... 5/33
1549	6 0	6 0	4 16 0		.....	34 0 0	„ „ 5 788/955
1550	3 0	9 0	.....		.....	28 16 0	„ „ 4 764/955
1552	11 1	0 19	.....		.....	.....	„ „ 2 955
1553	.....	.....	1 16 0 2 0 0	23 2½ 22 0	0 ½ 2 0	.....	„ „ 11 151/956 „ „ 11 1/10
1553	.....	.....	3 0 0	.....	.....	36 0 0	„ „ 11 11/191
1559	11 2	0 18	.....	.....	.....	.....	.....
1577	.....	.....	3 0 3	.....	.....	36 1 10½	.....
1601	.....	.....	3 2 0	.....	.....	36 10 0	„ „ 10 5614/5934 „ „ 10 617/683
1604	.....	.....	4 2 6	.....	.....	.....	.....
1605	.....	.....	.....	.....	.....	40 10 0	„ „ 12 876/5921 „ „ 12 196/1705
1611	.....	.....	.....	.....	.....	44 11 0	.....
1612	.....	.....	3 2 0	.....	.....	44 10 0 40 18 4	„ „ 13 1171/5921 „ „ 13 435/1364

Silver Coinages, the Purity of the Metal, and the Ratio of Gold from the Conquest to the present time.

ENGLAND—*continued.*

	Silver.			Gold.			
A.D.	Fineness	Alloy.	Current Value, or Mint Price of 1 lb.	Fineness.	Alloy.	Current Value, or Mint Price of 1 lb.	Ratio of Gold to Silver.
	Oz. Dwt.	Oz. Dwt.	£ s. d.	Crs. Grs.	Crs. Grs.	£ s. d.	
1623	.....	.....	.....	.....	.....	44 10 0 41 0 0	„ „ 13 2069/5021 „ „ 13 116/341
1626	.....	.....	3 5 6	.....	.....	44 0 0	.....
1626	.....	.....	3 2 0	.....	.....	44 10 0 41 0 0	....
1670	.....	.....	.....	22 0	2 0	44 10 0	„ „ 14 231/683
1718	.....	.....	.....	.....	.....	46 14 0	„ „ 15 2880/13640
1817	.....	.....	3 6 0	.....	.....	... ...	„ „ 14 288/1000

SCOTLAND.

	Oz. Dwt.	Oz. Dwt.	£ s. d.	Oz. d. gr.	Oz. d. gr.	£ s. d.	lb. oz. dwt. grs.
1066	11 2	0 18	1 0 0	.....	.....	.....	.....
1306	.....	.....	1 1 0	.....	.....	.....	.....
1366	.....	.....	1 5 0				
1367	.....	.....	1 9 4	11 18 18	0 1 6	17 12 0	11 1 17 22
1390	.....	.....	.....	.....	.....	19 4 0	.....
1393	.....	.....	1 12 0	.....	.....	.....	.....
1424	.....	.....	1 17 6	.....	.....	22 10 0	.....
1451	.....	.....	3 4 0	.....	.....	33 6 0	9 8 4 14
1456	.....	.....	4 16 0	.....	.....	50 0 0	.....
1475	.....	.....	7 4 0	.....	.....	78 15 0	10 2 0 20
1484	.....	.....	7 0 0	.....	.....	.....	10 5 7 9
1529	11 0	1 0	9 12 0	.....	.....	108 0 0	.....
1556	.....	.....	13 0 0	11 0 0	1 0 0	144 0 0	10 5 8 6
1565	.....	.....	18 0 0	.....	.....	.....	.....
1571	9 0	3 0	16 14 0	.....	.....	.....	.....
1576	8 0	4 0	.....	.....	.....	.....	.....
1577	.....	.....	.....	.....	.....	240 0 0	.....
1579	11 0	1 0	22 0 0	10 10 0	1 10 0	.....	11 5 2 20
1581	.....	.....	24 0 0	.....	.....	.....	.....
1597	.....	.....	30 0 0	11 0 0	1 0 0	360 0 0	12 0 0 0
1601	.....	.....	36 0 0	.....	.....	432 0 0	13 2 7 11
1633	.....	.....	.....	.....	.....	492 0 0	15 2 10 7
1738	.....	.....	37 4 0	.....	.....	560 14 0	

On a DOUBLE STANDARD.

17. We have seen that a large number of eminent writers have observed that the fundamental idea of Currency is debt; and that specie is, in fact, only the most general form in which this is recorded and transferred. That portion of the Currency which a debtor can compel his creditor to receive as payment of the debt due from him, and as, in fact, a means of obtaining any services he may require from some else, is called MONEY, or LEGAL TENDER, and sometimes the *measure* or *standard* of value.

When coins are struck of two different metals, and each is made indiscriminately legal tender to an unlimited amount, there is said to be a double standard.

Silver money was, at the time of the conquest, the only legal tender. Afterwards, in the reign of Edward III., gold money was coined to be as nearly as possible equal in value, to a certain amount of silver money, and, for several centuries, they were each legal tender in discharge of any amount of debt.

It would seem apparently to be very convenient to have money of both metals. The gold for large payments, and the silver for smaller ones. Nevertheless, there are certain fundamental objections to having both metals as legal tender to any amount.

We have observed that it is a fundamental law of the coinage, found to be absolutely true in all ages and countries, that good and bad coins cannot circulate together, but that the bad coin drives the good coin from circulation. That is to say, that the one which is *overrated*, expels the one that is *underrated*.

Exactly the same consequence follows if the coins be made of different metals.

Gold and silver have value with respect to each other, just as any other commodities have; and this value is constantly changing in the market of the world; though, no doubt, in a minute degree. Now, coins of gold and silver may be issued at a fixed relative value, which may be true at the time of issue; but the value of the metals is constantly changing in the open market, and hence, the mint value of the coins never remains for any length of time in proper adjustment with their market value; and, consequently, the inevitable result happens, the coin that is

overrated drives out the coin that is underrated; and the latter is melted down and exported to where it will fetch a better price in the market.

The reason is plain. Suppose that any time a gold coin is issued from the Mint to represent twenty shillings in silver, and that it is either misrated, or the market value of the metals has so changed from the Mint value, that it ought in reality to exchange for twenty-one shillings, it is clear that merchants will then discharge their debts in silver. All the gold coin will be melted down, and exported to where it can buy twenty-one shillings in silver; and thus, in a very short space of time, it will disappear from circulation.

This is what has repeatedly happened in the coinage of this country, and, from the cause not being understood, it was for many ages a source of great perplexity to financiers. It would be too long to enumerate these instances here, to establish the truth of the doctrine, but they will be found in our *Dictionary of Political Economy, Art. Coinage of England.* And we will only confine our attention here to a late example. At the beginning of the last century, both gold and silver were legal standards in England and France, and it was from the misrating of the value of the coins by the two Mints, that gold came to be considered as *the* legal standard of England, and silver *the* legal standard of France.

In 1663, Charles II. issued a splendid gold coinage of £5, £2, and 20s. pieces. The latter were called guineas, as they were made of gold brought home by the African Company. They were struck to be equivalent to twenty shillings in silver, and thus to represent the £, in gold. The pound weight of crown gold was ordered to be cut into 44½ guineas, and continued to be so as long as they were coined.

From some fatality they seemed to be always incapable at the English Mint of ascertaining the true value of gold and silver according to their market rates. The guinea was soon found to be underrated, and, accordingly, the old practices of clipping, melting, and exporting were soon in full operation, and the scarcity of money was complained of in Parliament.

In April, 1690, the great scarcity of silver coins occasioned great public inconvenience. The goldsmiths complained to the House of Commons that they had ascertained that immense

quantities of silver bullion and dollars had been exported. That many Jews and merchants had recently bought up vast quantities of silver to carry out of the kingdom, and had given three half-pence an ounce above its regulated value. That this had encouraged the melting down of much plate and milled money, whereby for six months past no bullion had been brought to the Mint to be coined. The house appointed a Committee, who verified these allegations. It was shown that the profit of melting down the milled money for exportation was above £25 per £1,000, and that the Mint price of silver was 5s. 2d. per ounce, but it was generally sold for 5s. 3½d. The House, in consequence, passed one of their useless laws against exporting bullion.

The state of the currency now became every day more disgraceful. Quantities of base and counterfeit coin were thrown into circulation. The House of Commons addressed the King to abolish the right of private coinage of half-pence and farthings. The current coins had been for many years clipped and adulterated, which in 1694 reached such a height that the silver coins current had lost nearly half their value, while a great part of the current money was only iron, brass, or copper plated.

As this state of matters gave rise to the first great currency debate of modern times, and brought about a great monetary crisis, we may dwell upon it rather fully.

During 1694 the silver coinage became worse daily, and by the end of the year, guineas, which had originally been coined to represent 20s., gradually rose, till they reached 30s. The exchange with Holland fell 25 per cent., and it would have fallen still lower, only it was shewn that the real exchange was in favor of England. The exchange with Ireland fell so much that £70 there was worth £100 in England.

The evils of clipping the coin reached so great a height at the end of 1694, that Mr. Fleetwood, the Chaplain-in-Ordinary to the King and Queen, being selected to preach before the Lord Mayor and Aldermen on the 16th December, 1694, made it the subject of his sermon on the text, Gen. xxiii., 16. In an admirable sermon, or rather politico-economical discourse, he denounced the fraud and wickedness of clipping and debasing the coinage. He said (p. 19) that the money was clipped down

nearly one half. He shewed that he understood the subject a great deal better than many men a century later. He shewed that, if the money generally were clipped, all the good and weighty money that remained must be exported. "The merchant that exports more goods from home than he imports from abroad, must unavoidably discharge the overbalance with good money; this he can never do with clipped, for it is not *Cæsar's face and titles* but *weight* and *goodness* that procure credit. And, if a foreigner import more of his country's goods than he carries away of ours, the overbalance must be paid in weighty money, for the clipped will not go abroad. Now, if the exportation of our weighty money (which is only now the milled) be a mischief to the nation, we see it is occasioned chiefly by the clipping."

The disgraceful state of the coinage could no longer be overlooked by Parliament. On the 8th of January, 1695, a Committee was appointed to consider the subject. At this time, says the Parliamentary History, Vol. v., p. 955:—"The difficulty lay so heavy upon the Government, that a stop was almost put to trade and taxes. The current silver coin had for many years begun to be clipped and adulterated; and the mischief of late had been so secretly carried on by a combination of all people concerned in the receipt of money, and so industriously promoted by the enemies of the Government, that all pieces were so far diminished and debased, as that five pounds in silver specie was scarce worth 40s., according to the standard; besides an infinite deal of iron, brass, or copper washed over or plated." The Committee recommended that the money should be re-coined into milled money. It estimated the expense at one million. That the new money should be of the same weight and fineness as the old. That the crown piece should be current at 5s. 6d. That various penalties should be imposed for offences against the coins. An Act was passed, statute 1695, c. 17, to prevent counterfeiting and clipping the coin of the kingdom. This statute averred that it was notorious that the current coin had been greatly diminished by clipping, rounding, filing, and melting, and that many false and counterfeit coins had been clipped, for the better disguising thereof, and that these practices had been much occasioned by those who drove a trade of exchanging broad money for clipped money, and other arts and devices. It,

therefore, prohibited any person from exchanging, lending, selling, borrowing, buying, receiving, or paying any broad or unclipped silver money for more in tale, benefit, profit, or advantage than the same was coined for, and ought by law to pass for, under a penalty of 10s. for every 20s. so illegally trafficked with. It also enacted that whoever should buy or sell, or knowingly have in his possession, any clippings or filings of the coin should forfeit them, as well as a penalty of £500, and be branded on the right cheek with a hot iron. It forbade any one but a trading goldsmith, or refiner of silver, to buy or sell bullion, under pain of imprisonment, and enacted numerous other vexatious penalties and regulations respecting the export of bullion. All these absurd cruelties were wholly ineffectual, and, while multitudes of miserable wretches were dangling on the gibbets, clipping and counterfeiting were as rife as ever. Guineas, which had originally been coined to be equal to 20s., had progressively risen as the silver got worse, till at this time they were current at 30s. of the base trash, which passed by the name of silver coin.

In February, 1696, several petitions were presented to the House of Commons (*Commons Journals*, Vol. xi., p. 445). The graziers, butchers, and others connected with Smithfield Market, said that £40,000 a week passed through their hands for cattle, which for almost twelve months past had been paid in guineas at 30s. a piece, for want of current silver. There are besides, abundance of pamphlets in existence which prove that guineas were commonly current for 30s in the spring of 1695.

The frightful disorder of the currency may be judged of by the following facts. In the months of May, June, and July, 1695, 572 bags of silver coin, each of £100, were brought into the Exchequer, whose aggregate weight, according to the standard, ought to have been 18,451 lbs., 5 oz., 16 dwts., 8 grs.: their actual weight was 9,480 lbs., 11 oz., 5 dwts., making a deficiency of 8,970 lbs., 7 oz., 11 dwts., 8 grs., shewing a deficiency in the weight of the current coins in the ratio of 10 to 22. One writer says (*An Essay for regulating of the coin. By A.V., Sept.* 2, 1695):—"Upon trial, I have found that 5s. of milled money hath weighed 8s. of the present current money, and 3s. of the 8s. was not clipped, only worn. Again, I have found 10s. in milled money to weigh 21s. of the clipped money. Again, 20s. of milled money to weigh 43s. of our now current money.

"I have gone to several goldsmiths in London, and have got them to take out of their counters a bag of £100 as came to hand, which, upon trial, I have found at one place to weigh:—

	Oz.	Dwt.	Gr.
A bag of £100	230	13	6
Another place £100 Weighed...	222	0	15
Another place	198	17	0
Another place	190	0	0
Another place	182	3	0
Another place	174	11	20
	1,198	5	17

"The £600 weighing in all 1,198 oz., 5 dwts., 17 grs., and is no more than what £310 in milled money will weigh.

"I am informed the money paid into the Exchequer doth weigh from 15 (and seldom the £100 reacheth) to 20 lbs. weight, so that the very best brought in there doth not weigh two-thirds of what it ought to do, and the money paid into the Exchequer is supposed, a great part of it, to come from the country.

"But, as it is believed that the money in the country is generally not the one-half so bad as it is in and near London, I have procured an account to be sent me from the following cities, from whence I am informed that £100 doth weigh on trial of *two* bags in each place, to be viz.:—

	Oz.	Dwt.	Gr.
In the City of Bristol, one bag of £100 weighed	240	0	0
Another weighed	227	15	0
In the City of Cambridge, a bag of £100 weighed	203	5	10
Another weighed	211	0	19
In the City of Exon, one bag of £100 weighed	180	7	0
Another weighed	192	3	0
In the City of Oxford, £100 in half-crowns weighed	216	10	0
£100 in shillings	198	0	15
	1,669	1	20

"The £800 weighing not more than £431 15s. of milled money will weigh, and but a very small difference between the weight of the money in London and the country."

This disgraceful state of the money gave rise to the greatest public confusion and distress, and a warm controversy arose whether the new money which should be coined should be of the old standard in weight, fineness, and denomination, or whether it should be depreciated, or raised in value, as it was absurdly called. This controversy was keenly disputed then, and we may pay some considerable attention to it, because it was revived under another form 116 years later, when the notes of the Bank of England were depreciated, and a strong party maintained that the standard of the coin should be depreciated to the level of the depreciated notes.

Mr. William Lowndes, the Secretary to the Treasury, was ordered by them to make a Report on the subject of the coin. This he did in *A Report containing an Essay for the Amendment of the Silver Coins.* London, 1695. In this he enters into a long, and at that time, valuable investigation of the history of the coinage, and its successive depreciations in weight and fineness. After giving the details of every Mint indenture for four hundred years, he says, p. 56:—"By the careful observing of which deduction here made, from the indenture of the Mint for above 400 years past (many of which are yet extant, and have been seen and examined by me), it doth evidently appear that it has been a policy constantly practised in the Mints in England (the like having indeed been done in all Foreign Mints belonging to other Governments), to raise the value of the coin in its extrinsic denomination from time to time, as any exigence or occasion required; and more especially to encourage the bringing in of bullion into the realm to be coined (though sometimes, when the desired end was obtained, the value has been suffered to fall again), so that, in the whole number of years from the 28th Edward I. until this time, the extrinsic value or denomination of the silver is raised in about a triple proportion." Here we cannot fail to observe the utter confusion of idea that Mr. Lowndes, and too many after his time, labour under. They manifestly suppose that, by raising the *name* of the coin they raise its *value.* The extrinsic value of the coin can by no possibility mean anything else but the quantity of things it will *exchange*

for. And to call the quantity of things it will exchange for its *denomination* is a most pitiable confusion of ideas. Mr. Lowndes then says:—"The which being premised, and every project for debasing the money (by the reason before given) being rejected as as dangerous, dishonourable, and heedless, it remains that our nation in its present exigence, may avail itself, by raising the value of its coins, and this may be effected either by making the respective pieces called crowns, half-crowns, shillings, and to be lesser in weight or by continuing the same weight or bigness, which is at present, in the unclipped moneys, and ordaining at the same time that every such piece shall be current at a higher price in tale.

"But, before I proceed to give my opinion on this subject, it seems necessary for me to assert and prove an hypothesis, which is this, namely, *That making the prices less, or ordaining the respective pieces (of the present weight) to be current at a higher rate, may equally raise the Value of Silver in our Coins.*

Mr. Lowndes then enters into an argument to prove that sixty pence are equal to seventy-five pence— a wild goose chase in which we decline to follow him.

His proposal was, then, that all the existing unclipped silver money should be raised in denomination to 6s. 3d. the crown, and other coins in proportion, so that the shilling would pass for fifteen pence instead of twelve. That new coins should be struck at the increased denominations. These coins he proposed to christen by new names. The reason he alleges for this proceeding are—"1. The value of the silver in the coin ought to be raised to the foot of 6s. 3d. in every crown, because the price of standard silver in bullion is risen (from divers necessary and unnecessary causes, producing at length a great scarcity thereof in England) to 6s. 5d. an ounce. This reason (which I humbly conceive will appear irrefragable) is grounded chiefly upon a truth so apparent, that it may well be compared to an axiom, even in mathematical reasoning, to wit,—That whensoever the extrinsic value of silver in the coin hath been, or shall be, less than the price of silver in bullion, the coin hath been, and will be, melted down."

He then enters into some objections against this proposal, and, says, p. 76:—"That everything having any value or worth whatsoever, when it becomes scarce, grows dear, or (which is the

same thing) it riseth in price, and, consequently, it will serve to pay more debts, or will buy greater quantities of other goods of value, or in anything else it will go further than it did before. That silver in England being grown scarce as aforesaid, is consequently grown dearer. That it has risen in price from 5s. 2d. to 6s. 5d. an ounce; and, by daily experience, 19 3-10 dwts. in sterling silver (equal to the weight of a crown piece) in England, doth and will purchase more coined money than 5s. by tale (though the latter be delivered *bona fide* in unclipped shillings or in a good bill), and consequently, doth and will purchase and acquire more goods, or necessaries, or pay more debts in England, or (being delivered here) it fetches more money in any foreign parts by way of exchange, than 5s. by tale, or the sixth part of a guinea by tale, or goods to the value of 5s. in tale only, do or can fetch, purchase or acquire. That this advanced price of the silver has been growing for some time, and is originally caused by the balance, excess, or difference above mentioned, which naturally and rationally produces such an effect * * * That the raising the value of the silver in our coins to make it equal to silver in mass, can in no sense be understood to be a cause of making silver scarce. That there can never be proposed any just or reasonable foot upon which the coin should be current, save only the very price of the silver thereof, in case it may be molten in the same place where the coins are made current, or an extrinsic denomination very near that price. It being most evident that if the value of the silver in the coins should (by any extrinsic denomination) be raised above the value or market price of the same silver reduced to bullion, the subject would be proportionably injured and defrauded, as they were formerly in the case of the base monies coined by public authority."

He then says the value of the silver in the coin ought to be raised, to encourage the bringing of bullion to the Mint to be coined. That this had been repeatedly done both in the English and Foreign Mints. That raising the value of silver in coin would increase the whole specie in tale, and thereby make it more commensurate to the need for it for carrying on the common traffic and commerce of the nation, and to answer the payments on the numerous contracts, securities, and other daily occasions, requiring a large supply of money for that purpose.

He says that at that time guineas passed current for 30s.

He then gives some details of the state of the coinage, by which he shewed that they were diminished by about half their usual weight.

We have said, that when coins are struck out of bullion, that the value, or purchasing power of the money depends upon the actual quantity of bullion in it, and not at all on the name of the coin. A most extraordinary delusion, however, began to prevail in early times, of which we have the first notice in Plutarch. It was this, that when coins were once struck and recognized by a certain name, that their value depended upon the *name*, and did not depend on the quantity of metal in them. About the end of the 17th century this incredible heresy began to find adherents in this country, and this notion long infested the minds of many financiers, and, we shall see hereafter, was stoutly maintained by the Government party in the great currency debates in 1811, and was the cause of great mischief to this country.

The extraordinary doctrine of Lowndes called forth a worthy antagonist, and were the origin of some of his most admirable writings, and they are of so much importance that we shall make some extracts from them, as there is no doubt that the fallacies he combated are even yet not entirely eradicated.

Locke had in 1691 published a treatise, in which he shewed the utter futility of interfering with the rate of interest by law, and combated the idea that was then becoming prevalent, that the value (as it was called) of the coin should be raised in order to keep it in the country. He shewed that the persons who supported such a plan were confounding the *denomination* with *value*, its name with the purchasing power, and that all such ideas proceeded from a confusion of terms, and had no real effect. The arguments of Locke, though by no means absolutely novel, had never been put before so luminously and fully. The proposal of Lowndes, coming from a man holding his official position, demanded a prompt notice and exposure. This Locke did, in *Further Considerations concerning Raising the Value of Money*, in which he exposed the fallacy of Lowndes's arguments:—"Raising of coin is but a specious word to deceive the unwary. It only gives the usual denomination of a greater quantity of silver to a less (*v. g.*, calling four grains of silver a

penny to-day, while five grains of silver made a penny yesterday), but adds no worth, or real value, to the silver coin, to make amends for its want of silver. That is impossible to be done, for it is only the quantity of silver in it, that is, and eternally will be, the measure of its value, and to convince any one of this, I ask whether he that is forced to receive but 320 ounces of silver under the denomination of £100 (for 400 ounces of silver which he lent under the like denomination of £100) will think these 320 ounces of silver, however denominated, worth those 400 ounces he lent? If any one can be supposed so silly, he need but go to the next market, or shop, to be convinced that men value not money by the denomination, but by the quantity of the silver there is in it. One may as rationally hope to lengthen a foot, by dividing it into 15 parts instead of 12, and calling them inches, as to increase the value of the silver that is in a shilling, by dividing it into 15 parts instead of 12, and calling them pence. This is all that is done when a shilling is raised from 12 to 15 pence.

"Clipping of money is raising without public authority, the same denomination remaining to the piece, that hath now less silver in it than it had before.

"Altering the standard, by coining pieces under the same denomination with less silver in them than they formerly had, is doing the same thing by public authority. The only odds is that, by clipping, the loss is not forced on any one (for nobody is obliged to receive clipped money); by altering the standard it is.

"Altering the standard by raising the money, will not get to the public, or bring to the Mint to be coined, one ounce of silver; but will defraud the king, the church, the universities, and hospitals, and of so much of their settled revenue as the money is raised, *v. g.*, twenty per cent. of the money (as is proposed), be raised one-fifth. It will weaken, if not totally destroy, the public faith, when all that have trusted the public, and assisted our present necessities, upon Acts of Parliament, in the million lottery, Bank Act, and other loans, should be defrauded of twenty per cent. of what those Acts of Parliament were security for. A less quantity of silver has a less value; and an equal quantity an equal value.

"4. That money differs from uncoined silver only in this, that the quantity of silver in each piece of money is ascertained by

the stamp it bears; which is set there to be a public voucher of its weight and fineness.

"5. That gold is treasure, as well as silver, because it decays not in keeping, and never sinks much in value.

"That gold is fit to be coined, as well as silver; to ascertain its quantity to those who have a mind to traffic in it; but not to be joined with silver as a measure of commerce."

Locke then examines Lowndes's doctrine, that the value (or denomination) of the silver coin should be raised to 6s. 3d. the ounce, because the price of standard silver had risen to 6s. 5d. the ounce—

"This reason seems to me to labour under several mistakes; as

"1. That standard silver can rise in respect of itself.

"2. That standard bullion is now, or ever was, worth or sold to the traders in it for 6s. 5d. the ounce, of lawful money of England. For, if that matter of fact holds not to be so, that an ounce of sterling bullion is worth 6s. 5d. of our milled weighty money, this reason ceases; and our weighty crown pieces ought not to be raised to 6s. 3d., because our light clipped money will not purchase an ounce of standard bullion, under the rate of 6s. 5s. of that light money. And let me add here, not for that rate neither. If, therefore, the author means here, that an ounce of standard silver is risen to 6s. 5d. of our clipped money, I grant it him, and higher too. But, then, that has nothing to do with the raising our lawful coin, which remains unclipped; unless he will say, too, that standard bullion is so risen, as to be worth, and actually to sell for, 6s. 5s. the ounce of our weighty milled money. This I not only deny, but further add, that it is impossible to be so. For 6s. 5d. of milled money weighs an ounce and a quarter near. Can it, therefore, be possible that an ounce of any commodity should be worth an ounce and a quarter of the self-same commodity, and of exactly the same goodness? for so is standard silver to standard silver. Indeed, one has a mark upon it which the other has not, but it is a mark that makes it rather more than less valuable, or, if the mark, by hindering its exportation, makes it less valuable for that purpose, the melting pot can easily take it off. * * *

"Those who say bullion is risen, I desire to tell me what they mean by risen? Any commodity, I think, is properly said to be risen, when the same quantity will exchange for a greater

quantity of another thing; but more particularly of that thing, which is the measure of commerce in the country. And thus corn is said to be risen among the English in Virginia, when a bushel of it will sell or exchange for more pounds of tobacco; among the Indians, when it will sell for more yards of wampom peak, which is their money; and among the English here, when it will exchange for a greater quantity of silver than it would before. Rising and falling of commodities are always between several commodities of distinct worths. But nobody can say that tobacco (of the same goodness) is risen in respect of itself. One pound of the same goodness will never exchange for a pound and a quarter of the same goodness. And so it is in silver: an ounce of silver will always be of equal value to an ounce of silver: nor can it ever rise or fall, in respect of itself: an ounce of standard silver can never be worth an ounce and a quarter of standard silver: nor one ounce of uncoined silver exchange for an ounce and a quarter of coined silver: the stamp cannot so much debase its value. Indeed, the stamp, hindering its free exportation, may make the goldsmith (who profits by the return of his money) give one 120th, or one 60th, or perhaps sometimes one 30th more, that is 5s. 2½d., 5s. 3d. or 5s. 4d. the ounce of coined silver for uncoined, when there is need of sending silver beyond seas; as there always is, when the balance of trade will not supply our wants, and pay our debts there. But much beyond this the goldsmith will never give for bullion since he can make it out of coined money at a cheaper rate.

"It is said bullion is risen to 6s. 5d. the ounce, *i. e.*, that an ounce of uncoined silver will exchange for an ounce and a quarter of coined silver. If any one can believe this, I will put this short case to him. He has of bullion, or standard uncoined silver, two round plates, each of an exact size and weight of a crown piece: he has besides, of the same bullion, a round plate of the weight and size of a shilling, and another yet less, of an exact weight and size of a three-pence. The two great plates being of equal weight and fineness, I suppose he will allow to be of equal value, and that the two less, joined to either of them, make it one-fifth more worth than the other is by itself, they having all three together one-fifth more silver in them. Let us suppose, then, one of the greater and the two less plates to have received the next moment (by miracle, or by the

mill, it matters not how) the mark, or stamp, of our crown, our shilling, and our three-pence: can anybody say, that now that they have got the stamp of our Mint upon them, they are so fallen in value, or the other unstamped piece so risen, that that unstamped piece, which a moment before was worth only one of the other pieces, is now worth them all three? Which is to say, that an ounce of uncoined silver is worth an ounce and a quarter of coined. This is what men would persuade us, when they say that bullion is raised to 6s. 5d. (of lawful money) the ounce, which I say is utterly impossible. Let us consider this a little further, in another instance. The present milled crown pieces, say they, will not exchange for an ounce of bullion, without the addition of a shilling, and a three-pence of weighty coin added to it. Coin but that crown piece into 6s. 3d., and then they say it will buy an ounce of bullion, or else they give up their reason and measure of raising the money. Do that which is allowed to be equivalent to coining of a present milled crown-piece into 6s. 3d., viz., call it 75 pence, and then also it must, by this rule of raising, buy an ounce of bullion. If this be so, this self-same milled crown-piece will, and will not, exchange for an ounce of bullion. Call it sixty pence, and it will not: the very next moment call it seventy-five pence, and it will. I am afraid nobody can think change of denomination has such power."

Locke then goes through each of Lowndes's arguments and proposals one by one, and gives them such a refutation as would have delighted the heart of Chillingworth. Among other things, he says:—"It is true, what Mr. Lowndes observes here, the importation of gold, and the going of guineas at 30s., has been a great prejudice and loss to the Kingdom. But that has been wholly owing to our clipped money, and not at all to our money being coined at 5s. 2d. the ounce: nor is the coining of our money lighter the cure of it. The only remedy for that mischief, as well as a great many others, is the putting an end to the passing of clipped money by tale, as if it were lawful coin."

To Lowndes's doctrine, that raising the coin by making it more in tale, would make it more abundant for general use, Locke says:—"Just as the boy cut his leather into five quarters (as he called them) to cover his ball, when cut into four quarters

it fell short; but after all his pains, as much of his ball lay bare as before; if the quantity of coined silver employed in England fall short, the arbitrary denomination of a greater number of pence given to it, or, which is all one, to the several coined pieces of it, will not make it commensurate to the size of our trade, or the greatness of our occasions. This is as certain, as that if the quantity of a board, which is to stop a leak of a ship fifteen inches square, be but twelve inches square, it will not be made to do it, by being measured by a foot which is divided into fifteen inches, instead of twelve, and so having a larger tale, or number of inches, in denomination, given to it.

"This, indeed, would be a convincing reason if sounds would give weight to silver, and the noise of a greater number of pence (less in quantity proportionably as they are more in number) were a large supply of money. * * *

"The necessity of trust and bartering is one of the many inconveniences springing from the want of money. This inconvenience the multiplying arbitrary denominations will no more supply, nor any ways make our scarcity of coin commensurate to the need there is of it, than if the cloth which was provided for clothing the army, falling short, one should hope to make it commensurate to that need there is of it, by measuring it by a yard one-fifth shorter than the standard, or changing the standard of the yard, and so getting the full denomination of yards necessary according to the present measure. For this is all that will be done by raising our coin, as is proposed. All it amounts to is no more but this, viz., That each piece, and, consequently, our whole stock of money, should be measured and denominated by a penny one-fifth less than the standard * *

"The increase of denomination does, or can do nothing in the case, for it is silver by its quantity and not denomination, that is the price of things and measure of commerce; and it is the weight of silver in it, and not the name of the pieces that men estimate commodities by, and exchange them for.

"If this be not so, when the necessity of our affairs abroad, or ill-husbandry at home, has carried away half our treasure, and a moiety of our money is gone out of England, it is but to issue a proclamation that a penny shall go for two-pence, sixpence for a shilling, half-a-crown for a crown, &c., and immediately, without any more ado, we are as rich as before. And, when half

the remainder is gone, it is but doing the same thing again, and raising the denomination anew, and we are where we were, and so on; whereby, supposing the denomination raised 15-16, every man will be as rich with an ounce of silver in his purse as he was before when he had 16 ounces there, and in as great plenty of money, able to carry on his trade without bartering, his silver, by this short way of raising, being changed into the value of gold; for, when silver will buy 16 times as much wine, oil, and bread, &c., to-day as it would yesterday (all other things remaining the same, but the denomination), it had the real worth of gold.

"This, I guess, everybody sees cannot be so, and yet this must be so, if it be true that raising the denomination one-fifth can supply the want, or one jot raise the value of silver in respect of other commodities, *i. e.*, make a less quantity of it to-day, buy a greater quantity of corn, oil, and cloth, and all other commodities, than it would yesterday, and thereby remove the necessity of bartering. For, if raising the denominations can thus raise the value of coin in exchange for other commodities, one-fifth, by the same reason it can raise it two-fifths, and, afterwards, three-fifths, and again, if need be, four-fifths, and as much further as you please. So that, by this admirable continuance of raising our coin, we shall be rich, and as well able to support the charge of the Government, and carry on our trade without bartering, or any other inconvenience for want of money, with 60,000 ounces of coined silver in England, as if we had six, or 60 millions. If this be not so, I desire any one to show me why the same way of raising the denomination, which can raise the value of money in respect of other commodities, one-fifth, cannot, when you please raise it another fifth, and so on? I beg to be told where it must stop, and why at such a degree, without being able to go further.

"It must be here taken notice of, that the raising I speak of here, is the raising of the value of our coin in respect of other commodities (as I call it all along) in contradistinction to raising the denomination. The confounding of these in discourses concerning money, is one great cause, I suspect, that this matter is so little understood, and so often talked of with so little information of the hearers.

"A penny is a denomination no more belonging to eight than to eighty, or to one single grain of silver: and so it is not necessary that there should be 60 such pence, no more nor less,

in an ounce of silver, *i. e.*, twelve in a piece called a shilling, and sixty in a piece called a crown: such like divisions, being only extrinsical denominations, are everywhere perfectly arbitrary. For, here in England, there might as well have been twelve shillings in a penny, as twelve pence in a shilling, *i. e.*, the denomination of the less pence might have been a shilling, and of the bigger a penny. Again, the shilling might have been coined ten times as big as the penny, and the crown ten times as big as the shilling; whereby the shilling would have but tenpence in it, and the crown a hundred. But this, however ordered, alters not one jot the value of the ounce of silver, in respect of other things, any more than it does its weight. This raising being but giving of names at pleasure to aliquot parts of any piece, viz., that now the 60th part of an ounce of silver shall be called a penny, and to-morrow that the 75th part of an ounce shall be called a penny, may be done with what increase you please. And thus it may be ordered by a proclamation, that a shilling shall go for twenty-four pence, and half-crown for sixty instead of thirty pence, and so of the rest. But that an half-crown should be worth or contain sixty such pence, as the pence were before the change of denomination was made, that no power on earth could do. Nor can any power but that which can make the plenty or scarcity of commodities, raise the value of our money their double in respect of other commodities, and make that same piece, or quantity, of silver, under a double denomination, shall purchase double the quantity of pepper, wine, or lead, an instant after such proclamation, to what it would do an instant before. If this could be, we might, as every one sees, raise silver to the value of gold, and make ourselves as rich as we pleased. But it is but going to market with an ounce of silver of one hundred and twenty pence, to be convinced that it will purchase no more than an ounce of silver of sixty pence; and the ringing of the piece will as soon purchase more commodities, as its change of denomination, and the multiplied name of pence, when it is called six score instead of sixty."

It may, perhaps, appear to some that the arguments put forward by Locke, are so simple and convincing, that it is almost a waste of ingenuity and labour to dwell on them at such length. But, unfortunately, this is not so. The confusion of idea between

the *name* and the *value* of a coin, is one which is but too prevalent even at the present day. It seems almost incredible that an able man like Mr. Lowndes could perceive that debasing the standard of the coin, by putting less silver and more alloy, was a public fraud, and an injury to all creditors, and yet that he should be totally incapable of perceiving that raising the denomination of the coin, was exactly the same thing in principle as debasing the standard. In each case the quantity of pure silver in a crown, or a shilling, was diminished. Nevertheless, this fallacy is deeply seated even at the present day. It was, moreover, exactly the same fallacy, under another form, which blinded and deluded the Bank of England, the Government, and the House of Commons in 1811, into their insane vote on the doctrine of the Bullion Report, that the Bank Note was depreciated. But, alas! instead of a Montague willing to learn wisdom from the counsels of a Locke, there was only a Vansittart, who refused to listen to Horner and Canning, and we are still smarting for his infatuation.

The Government, adopting the councils of Locke and Newton, restored the coinage according to its ancient weight, fineness, and denomination.

The political benefits which followed this great restoration of the coinage are beyond the purpose of this work. In 1707, the union of the kingdoms necessitated a new coinage. At the same time the relative value of the gold and silver coins began to differ from the market value of the two metals, and, as silver was underrated, it became very scarce. It is much to be lamented that the Government, having adopted Locke's arguments in favour of the maintenance of the standard, did not also adopt his argument with respect to the necessity of there being only one standard of value. It was perfectly conclusive, and the evils, which he had shewn must necessarily follow from this economic error of having two measures of value, manifestly displayed themselves. In 1708, the Government offered a premium of 2½d. per ounce to every one who brought foreign silver coin, or plate of any sort, of standard fineness, to the Mint to be coined. This, however, was quite ineffectual, and as matters grew worse every day, the Government referred the matter to Sir Isaac Newton, who had for many years been at the head of the Mint, to report upon.

Sir Isaac Newton said, in his Report (*Parl. Hist.*, vii., 526): "That a pound weight Troy of gold, 11 ozs. fine, and 1 oz. alloy, is cut into 44½ guineas; and a pound weight of silver, 11 ozs. 2 dwts. fine, and 18 dwts. alloy, is cut into 62 shillings; and, according to this rate, a pound weight of fine gold is worth 15 pounds weight 6 ozs. 17 dwts. and 5 grns. of fine silver, reckoning a guinea at £1 1s. 6d. in silver money. But silver in bullion, exportable, is usually worth 2d. or 3d. per ounce more than in coin; and if, as a medium, such bullion of standard alloy be valued at 5s. 4½d. per ounce, a pound weight of fine gold will be worth but 14 lbs. 11 ozs. 12 dwts. 9 grns. of fine silver in bullion; and, at this rate, a guinea is worth but so much silver as would make 20s. 8d. When ships are lading for the East Indies, the demand of silver for exportation raises the price to 5s. 6d. or 5s. 8d. per ounce, or above; but I consider not these extraordinary cases.

"A Spanish pistole was coined for thirty-two rials, or four pieces of eight rials, usually called pieces of eight, and is of equal alloy, and the sixteenth part of the weight thereof; and a Doppio Moeda of Portugal was coined for ten crusados of silver, and is of equal alloy, and the sixteenth part of the weight thereof. Gold is, therefore, in Spain and Portugal, of sixteen times more value than silver of equal weight and alloy, according to the standard of those kingdoms; at which rate a guinea is worth 22s. 1d. But this high price keeps their gold at home in good plenty, and carries away the Spanish silver into all Europe; so that at home they make their payments in gold, and will not pay in silver without a premium; upon the coming in of a Plate fleet the premium ceases, or is but small; but, as their silver goes away and becomes scarce, the premium increases, and is most commonly about six per cent., which, being abated, a guinea becomes worth about 20s. 9d. in Spain or Portugal.

"In France, a pound weight of fine gold is reckoned worth fifteen pounds weight of fine silver; in raising or falling their money, their Kings' edicts have sometimes varied a little from this proportion, a little in excess or defect; but the variations have been so little, that I do not here consider them. By the edict of May, 1709, a new pistole was coined for four new Louises, and is of equal alloy, and the fifteenth part of the

weight thereof, except the errors of their mints; and by the same edict, fine gold is valued at fifteen times its weight of fine silver; and at this rate a guinea is worth 20s. 8½d. * *

"The ducats of Holland and Hungary, and the Empire, were lately current in Holland among the common people, in their markets and ordinary affairs, at five guilders in specie, and five stivers; and commonly changed for so much silver moneys in three-guilder pieces and guilder pieces, as guineas are with us for 21s. 6d. sterling; at which rate a guinea is worth 20s. 7½d.

"According to the rates of gold to silver in Italy, Germany, Poland, Denmark, and Sweden, a guinea is worth about 20s. and 7d., 6d., 5d., or 4d., for the proportion varies a little within the several Governments in these countries. In Sweden, gold is lowest in proportion to silver, and this hath made that kingdom which formerly was content with copper money, abound of late with silver, sent thither (I suspect) for naval stores.

"In the end of King William's reign, and the first year of the late Queen, when foreign coins abounded in England, I caused a great many of them to be assayed in the Mint, and found by the assays that fine gold was to fine silver in Spain, Portugal, France, Holland, Italy, Germany, and the northern kingdoms, in the proportion above mentioned, errors of the Mint excepted.

"In China and Japan, one pound weight of fine gold is worth but 9 or 10 pounds weight of fine silver; and in East India it may be worth 12; and this low price of gold in proportion to silver carries away the silver from all Europe.

"So, then, by the course of trade and exchange between nation and nation in all Europe, fine gold is to fine silver as 14 4-5, or 15 to one; and a guinea at the same rate is worth between 20s. 5d. and 20s. 8½d.; except in extraordinary cases, as when a Plate fleet is just arrived in Spain, or ships are lading here for the East Indies, which cases I do not here consider. And it appears by experience as well as by reason, that silver flows from those places where its value is lowest in proportion to gold, as from Spain to all Europe, and from all Europe to the East Indies, China, and Japan; and that gold is most plentiful in those places in which its value is highest in proportion to silver, as in Spain and England.

"It is the demand for exportation which hath raised the price of exportable silver about 2d. or 3d. in the ounce above that of silver in coin, and hath thereby created a temptation to export, or melt down, the silver coin rather than give 2d. or 3d. more for foreign silver; and the demand for exportation arises from the higher price of silver in other places than in England in proportion to gold; that is from the higher price of gold in England than in other places in proportion to silver, and, therefore, may be diminished by lowering the value of gold in proportion to silver. If gold in England, or silver in East India, could be brought down so low as to bear the same proportion to one another in both places, there would be here no greater demand for silver than for gold to be exported to India, and if gold were lowered only so as to have the same proportion to the silver money in England, which it hath to silver in the rest of Europe, there would be no temptation to export silver rather than gold to any other part of Europe. And to compass this last, there seems nothing more requisite than to take off about 10d. or 12d. from the guinea; so that gold may bear the same proportion to the silver money in England, which it ought to do by the course of trade and exchange in Europe. But if only 6d. were taken off at present, it would diminish the temptation to export or melt down the silver coin. And, by the effects, would shew hereafter better than can appear at present, what further reduction would be most convenient for the public.

"In the last year of King William, the dollars of Scotland, worth about 4s. 6½d., were put away in the North of England for 5s., and at this price began to flow in upon us. I gave notice thereof to the Lords Commissioners of the Treasury; and they ordered the collectors of taxes to forbear taking them, and thereby put a stop to the mischief.

"At the same time, the louis-d'ors of France, which were worth but 17s. ¾d. a piece, passed in England at 17s. 6d. I gave notice thereof to the Lords Commissioners of the Treasury, and his late Majesty put out a proclamation that they should go but at 17s.; and, thereupon, they came to the Mint, and £1,400,000 were coined out of them: and if the advantage of 5¼d. in a louis-d'or sufficed at that time to bring into England so great a quantity of French money, and the advantage of three farthings in a louis-d'or to bring it to the Mint, the advantage of 9½d. in a

guinea, or above, may have been sufficient to bring the great quantity of gold which hath been coined in these last fifteen years, without any foreign silver.

"Some years ago, the Portugal moedors were received in the West of England at 28s. a piece. Upon notice from the Mint, that they were worth only about 27s. 7d., the Lords Commissioners of the Treasury ordered their receivers of taxes to take them at no more than 27s. 6d. Afterwards, many gentlemen in the West sent up to the Treasury a petition, that the receivers might take them again at 28s., and promised to get returns for money at that rate; alleging, that when they went at 28s., their country was full of gold, which they wanted very much. But the Commissioners of the Treasury, considering that at 28s. the nation would lose 5d. a piece, rejected the petition. And if an advantage of 5d. in the 28s. did pour that money in upon us, much more hath an advantage to the merchant of 9¼d. in a guinea, or above, been able to bring into the Mint, great quantities of gold, without any foreign silver, and may be able to do so still, till the cause be removed.

"If things be let alone till silver money be a little scarcer, the gold will fall of itself; for people are already backward to give silver for gold, and will in a little time refuse to make payments in silver without a premium, as they do in Spain; and this premium will be an abatement of the value of the gold; and so the question is, whether gold shall be lowered by the Government, or let alone till it falls of itself, by the want of silver money.

"It may be said, that there are great quantities of silver in plate, and if the plate were coined, there would be no want of silver money. But I reckon that silver is safer from exportation in the form of plate than in the form of money, because of the greater value of the silver and fashion together; and, therefore, I am not for coining the plate, till the temptation to export the silver money, which is a profit of 2d. or 3d. an ounce, be diminished; for, as often as men are necessitated to send away money for answering debts abroad, there will be a temptation to send away silver rather than gold, because of the profit, which is almost 4 per cent.; and for the same reason foreigners will choose to send hither their gold rather than their silver."

Mr. Aislabie, the Chancellor of the Exchequer, brought the subject of the great scarcity of silver coin before the House on

the 21st of December, 1717, and was seconded by Mr. Caswall, who gave details of the different relative values gold and silver coin had borne with respect to each other, according to the plenty or scarcity of each, and said that the over-valuation of gold in the current coins of great Britain, had caused the exportation of great quantities of silver specie. To prove this, he laid open a clandestine trade which had been carried on for many years by the Dutch, Hamburghers, and other foreigners, in concert with the Jews and other traders here, which consisted in exporting silver coins, and importing gold in lieu thereof, which being coined into guineas at the Tower, near 15d. was got by every guinea, which amounted to about 5 per cent., and, as these returns might be got five or six times in the year, considerable profits were made by it. In his opinion, the only way of checking this was to lower the price of guineas and other gold specie.

Sir Isaac Newton had shewn that the true value of the guinea, according to the market value of gold and silver at that time, was 20s. 8d. The House, however, did not adopt his recommendation to its full extent, but they addressed the Crown to issue a proclamation to make guineas current at 21s. In accordance with this, the King issued a proclamation on the 22nd December, 1717, making guineas current at 21s., and reducing the other gold coins for 23s. 6d. and 25s. 6d. to 23s. and 25s. each.

This was the last alteration made in the relative values of gold and silver coin, and now, in the language of the Mint, the price of gold was fixed at £3 .17s. 10½d. an ounce, which is so sore a puzzle to many persons. This alteration in the value of guineas created some alarm that it might be further reduced, and caused considerable confusion in trade, but, in January, 1718, both Houses of Parliament passed resolutions that they would not alter the standard of the gold and silver coins of the kingdom in fineness, weight, or denomination.

By the reduction of the price of the guinea, the value of gold to silver was fixed at 15 $\frac{1}{6}\frac{4}{8}\frac{2}{2}\frac{9}{0}\frac{5}{0}$ to 1; but, as in Holland and France the rate was 14½ to 1, a profit still remained on exporting silver and importing gold. Thus gold became the cheapest medium in which to make payments; and, by this means, during the course of the last century, it became gradually an understood thing in

commerce that gold was the standard of value. This custom was finally adopted as law in 1816.

We shall not here notice the great Currency Debates in 1811, as that is done in a subsequent chapter. We rejoice to see the great names of Locke and Newton establishing on incontrovertible foundations the great fundamental principles of the coinage, which are now at length happily adopted.

Immediately after the cessation of the war, the Government took in hand the great work of a complete re-coinage. The great principle, so earnestly enforced by Locke, of having only one metal as a standard measure of value, was at length adopted. During the course of the last century merchants had universally adopted the custom of paying their debts in gold, because, from the misrating of the Mint, it was the cheapest medium of payment. All contracts had consequently come to be considered as payable in gold, and this was now adopted as the sole legal tender. At the end of the 18th century the relative value of gold and silver had undergone a perceptible change in the markets of the world. Hence, the valuation that had been made of the two metals in 1717 no longer corresponded to the market value of the two metals, and if a silver coinage has been issued of the former denomination and weight, the very same effects would have followed which had been so often experienced before. It would immediately have disappeared from circulation. In order to guard against this, the power of private persons to have silver coined was taken away, and the pound weight of silver was ordered to be cut into 66 shillings instead of 62. But of these, four are kept back for expenses of coinage, and by way of seignorage, and only 62 are issued, but they are declared to be equal to £3 2s. in tale. The result of this is, that the present shillings pass current for rather more than 6 per cent. above their real value. In order to prevent any injustice to individuals from this depreciation of the coinage, it was enacted, that no tender of payment in silver above 40s. at any one time, should be legal, either by tale or by weight. This arrangement of the English coinage has this great merit, that it allows a very considerable change to take place in the market value of gold and silver without causing any disturbance in the currency. The amazing quantities of gold poured into Europe, greater than had ever before occurred in so short a time, created great

apprehensions in many persons' minds that gold was going to undergo a rapid dimunition in value, similar to what had happened in the 16th century. If this were the case, it would become necessary to consider what should be done with the British coinage. It is not likely that Parliament would ever sanction any alteration in the weight of the measure of value, or in other words, alter the Mint price of gold. If such a diminution in the value of gold should take place, of which there does not appear, as far as can be conjectured on so doubtful a point, any very great likelihood, the probable plan adopted would be to diminish the weight of the shilling to the 70th part of the pound.

On a SEIGNORAGE.

18. In former times it was customary for the Crown to levy a duty, or profit, on coining, which was called a *Seignorage*. The actual expense of coining is called *Mintage* or *Brassage*. This profit formerly brought in a considerable revenue to the Crown, and accordingly, the coin was frequently called in, and renewed for the sake of the profit.

But by the 18 Car. II., c. 5, the seignorage previously levied was entirely abolished; and it was enacted that whoever brought sterling silver, or standard gold to the Mint should receive back an exactly equal amount in weight of current coin, "without any defalcation, diminution, or charge for the assaying, coinage, or waste in coinage," and certain taxes were appropriated for the expenses of the Mint.

This continued to be law until the 56 Geo. III., c. 68, when the great restoration of the coinage took place at the end of the war, when the plan which had been advocated by Sir William Petty, Locke, Harris, and Lord Liverpool was adopted, of making gold alone the standard money, and silver and copper only subsidiary coins.

At the time when the Act of Charles II. was passed, the Mercantile System was at the height of its popularity, and no doubt it was considered of the utmost national advantage to have as much specie as possible in the country. Though gold and silver were equally legal tender, silver was considered as the standard of the country, and the foreign exchanges were always reckoned in the silver coinage. But after 1717, when the

guinea was fixed at 21s., though Sir Isaac Newton shewed that it was only worth 20s. 8d., in consequence of its being so over-rated in comparison with silver, the custom became general among merchants to discharge all their debts in gold: and thus gold came to be considered as the standard of the country. All the best silver coins were culled out and exported, and only the worn, clipped, and degraded coins remained in circulation.

The question whether the expenses of coinage should be charged or not, has given rise to much difference of opinion.

Smith shewed [1] that gold in coin was somewhat more valuable than in bullion in his day, because it was more convenient, and although the coinage was free, yet the bullion which was carried to the Mint could not be returned till after a considerable delay, and this delay was equivalent to a small duty, which rendered gold coin somewhat more valuable than gold bullion.

This delay was so inconvenient to merchants that it was their custom to take their bullion to the Bank of England and sell it to the Bank in exchange for notes. Although the Mint was legally open to any one, yet, practically, the Bank was the only body that had gold bullion coined. The Directors often purchased bullion at £3 17s. 6d. the oz; but the average price they paid for it during the 20 years preceding 1797, was £3 17s. 7¾d. the oz., or 2¾d. under the Mint Price [2]; this shewed the sum the merchants were willing to pay for the convenience of having their bullion immediately converted into coin; and was in fact a duty to that amount.

Smith thought [3] that a small seignorage, or duty, upon the coinage of both gold and silver would increase the value of the coin still more above that of bullion. This excess of value of the coin above bullion would prevent the melting down of the coin, and would discourage its exportation. If upon any public exigence it should become necessary to export the coin, the greater part of it would soon return again of its own accord. Abroad it could sell only for its weight in bullion. At home it would buy more than that weight. There would be a profit, therefore, in bringing it home again.

Lord Liverpool, however, whose scheme of coinage, as developed in his *Treatise on the Coins of the Realm*, was

[1] *Book* i., *ch.* 5.

[2] *Lord Liverpool's Treatise on the Coins of the Realm*, 143. [3] *Book* i., *ch.* 5.

ultimately adopted, was adverse to any charge being made for coining gold, the standard measure of property. He says,[1] —"It is and has long been a dispute among the writers on coins, whether the charge of fabricating coins, and even a seigneurage payable to the Sovereign, should not be taken out of our coins, as is practised in most foreign countries; and many eminent men have differed on this point. I incline to think, that the charge of fabrication should not be taken from these coins which are the principal measure of property and instrument of commerce; and still less any profit derived from seigneurage payable to the Sovereign.

"Because this principal measure of property would not in such case be perfect.

"Because the merchants of foreign nations who have any commercial intercourse with this country, estimate the value of our coins only according to the intrinsic value of the metal that is in them; so that the British merchant would, in such case, be forced to pay, in his exchanges, a compensation for any defect which might be in these coins; and he must necessarily either raise the price of all merchandise and manufactures sold to foreign nations in proportion or submit to this loss.

"Because no such charge of fabrication has been taken at the British Mint for nearly a century and a half past; and if it were now to be taken, the weight of the new Gold Coins must be diminished, to pay for this fabrication.

"And lastly, because these new Gold Coins would either differ in weight from those now in currency, or, to prevent this evil, the whole of our present gold coins must be taken out of circulation, brought to the Mint, and be recoined."

In accordance with this scheme, the 56 George III., c. 68, which established the present system of our coinage, repealed (s. 1.), the Act of Charles II. permitting every one to have silver bullion coined free at the Mint. It enacted that in future the Pound Troy of standard silver should be coined into 66 shillings, of which 62 shillings should be delivered to the person bringing the bullion, and 4 shillings retained, out of which the expenses of coining should be first deducted, and the remainder should be carried to the Consolidated Fund. Silver coin (s. 12), is not legal tender for any sum above forty shillings.

[1] *Letter to the King, p.* 154.

By s. 11., the gold coin of the Realm is declared to be the only legal tender for payment within the United Kingdom of Great Britain and Ireland.

It was ordered by the Act, that after a date to be named by a Royal Proclamation, all persons might bring their standard silver to be coined at the Mint at the rate above named. But no such proclamation was ever issued, and consequently it is only the Government which now has silver coined, as it may deem necessary for the wants of the public. Silver is coined at a charge of about 6 per cent.; and copper is coined at the rate of £224 per ton, which gives a profit of about 100 per cent.

McCulloch has advocated the imposition of a seignorage on the coinage: but we think that the arguments of Lord Liverpool are correct, and time has greatly added to their strength.

Those who argue in favour of a seignorage, that it would make coin more valuable than bullion, and so discourage the exportation of the coin and encourage its importation, have usually failed to observe that there is already a moderate seignorage on the coinage; for the Bank of England seldom gave more than £3 17s. 6d. an oz. for bullion, which was in fact a seignorage of 4½d. per oz. By the Bank Charter Act of 1844, the Bank is obliged to give £3 17s. 9d. per oz., so that there is a seignorage now of 1½d. per oz. on coin.

It may seem just, at first, that those who wish to have the convenience of having their bullion converted into coin should pay for this convenience, as for any other manufacture; but we think that broad general considerations of public policy, at all events, under present circumstances, outweigh such a reason. It must be remembered that all subsisting contracts, public and private, have been entered into on the basis of receiving a definite quantity of gold bullion; to charge therefore, the expense of coinage by taking a certain quantity out of the sovereign would be a distinct fraud upon all public and private creditors, for which they would be entitled to compensation at the hands of their debtors. Coins in foreign countries are of no more value than bullion; consequently to diminish the weight of the sovereign would disarrange the whole foreign commerce of the country. There are many cases, too, in which it would be impossible to throw the expenses of coining on private

parties. Coin, after being some time in circulation, diminishes in weight by inevitable wear and tear, without any bad practices being resorted to; now it is of the greatest national importance that the coinage should be kept at its full legal standard, and that light coin should be recoined. But how are private persons to be charged with this? Private bankers cannot weigh every sovereign they receive from their customers; but when these bankers pay the light sovereigns they receive in the course of business into the Bank of England, the Bank weighs every single sovereign it receives, and gives the banker credit only for the weight of bullion he pays in. The loss therefore of this light gold now falls on private banking companies. The Bank of England withdraws every single light sovereign paid into it, from circulation, and sends it to be recoined. Now who is to pay the cost of this recoinage? It is quite clear that private persons cannot be charged with it: and therefore the charge must be borne by the public. The fact is, that it is a great national advantage to have the coinage always in the most perfect state, and the nation should pay for it: even though some individual merchants may reap a profit from it. It seems to be very similar in principle to the reasons for which State subventions are given to Ocean Steam Companies to carry the mails. It might be said that those who reap the benefit should pay the cost in the postage of their letters. But it is held that it may be of public advantage that regular and rapid steam communication should be established between different countries, and consequently State subventions are paid to most of the great companies; and individuals reap the benefit of it. So it has been held a matter of public importance to develope the formation of railways by State guarantees, by which the persons who travel by the railway are benefited. For the same reason it is a matter of great public importance to maintain the standard of the coinage, and therefore the expense of coinage should be borne by the nation, even though some individual merchants may profit by it.

OF A DECIMAL COINAGE.

19. We must now consider a question which has excited considerable discussion in recent times, viz.: Whether it is prac-

ticable and expedient to decimalize the coinage of England. The great monetary reforms which have taken place on the continent in recent years, and the immense benefits which have followed the unification of the coinages of France, Italy, Belgium and Switzerland, have naturally led many persons of great scientific acquirements to advocate the adoption of a Decimal System of coinage in England; and the assimilation of the coinage of this country to that of the great extent of Europe which has adopted the French system. We have now to consider whether such a system can be introduced into this country; and whether there is any reasonable prospect of a uniform system of coinage being adopted by all nations.

20. A decimal coinage is one consisting of pieces related to each other in the ratio of 10, or some power of 10.

There are three distinct systems of coinage—

First. Where the lowest coin of all, or even an imaginary unit below any existing coin is taken, and all other coins are multiples of that unit. That is, where the coinage proceeds exclusively by multiplication.

Secondly. Where some intermediate coin is taken at the unit, and other coins are struck both as multiples and as subdivisions of that unit. That is where the coinage is a combination of multiplication and division.

Thirdly. Where the highest coin of all is taken as the unit, and all others are aliquot parts of that unit. That is, where the coinage proceeds exclusively by sub-division.

21. Now, in the first system it is natural that all accounts should proceed by decimal multiples of the unit. And, therefore, there may be decimal accounts. But that does not necessarily imply a decimal coinage. Thus, from time immemorial, the only coin in China has been the *cash*, which is the 1000th part of the ounce of silver. This is the only coin in existence, and all sums are expressed as decimal multiples of that unit. This is attended with very great convenience, and calculations are very quickly performed, and travellers tell us of the expertness with which mere children can perform long calculations. But the Chinese have not a decimal coinage, as there are no multiples of the cash.

22. The French coinage is an example of the second system. In that the franc is the unit, and there are both multiples and divisions of the franc. The Napoleon is equal to 20 francs, and there are divisions of the franc according to a decimal system. This coinage is decimal so far as the franc, but not further, as the Napoleon is not decimally related to the franc.

23. The English coinage is an example of the third system. In that the unit is the pound sterling, now a gold coin. And all other coins are aliquot parts of the pound sterling. The English coinage, therefore, proceeds exclusively by *sub-division*.

24. Now, the decimal system of accounts having been applied with great success to the first system; and a decimal system of accounts and coins having been adopted with more or less success in the second system; a pretty strong feeling has been excited, especially among scientific men, to apply the decimal system to the English coinage. That is, to make the different pieces of the coinage related to each other in a decimal ratio.

25. At first sight such a scheme appears to have a great many advantages. It is much easier to cast up accounts decimally, than by our present plan. And it seems a very plausible thing to say, that as the integers proceed on the denary scale, so should the subdivisions. That is, if it be multiplied decimally, why should it not be divided decimally?

26. This idea, however plausible it may seem, is utterly erroneous. It is founded on the idea that integers expressed in the denary scale and decimal fractions are correlative systems. People see the figures on one side of the decimal point increase by powers of 10, and on the other decrease by powers of 10, and they jump at the conclusion that they proceed on the same principles. Nevertheless this is an entire fallacy, and it is quite easy to shew it. Thus, if we multiply 1· by 3·, we have 3· an exact answer; but if we divide 1· by 3, do we have ·3 an exact answer? If we multiply 1· by 2, we have 2·; but if we divide 1· by 2, we have not ·2, but ·5. Which shews at once that decimal fractions are different in principle from multiplication of integers.

27. To shew this more clearly, we may multiply an integer by any number we please—2, 3, 4, 5, 6, &c., and we always obtain an exact result, which, for the purposes of convenience, we may reckon by groups of 10. It is, therefore, physically possible to multiply any unit by any number whatever, and obtain an exact result.

28. So we may divide an integer by 2, 3, 4, 5, 6, 7, &c., or any number, and obtain an exact result. Hence, division by the ordinary numbers is the correlative of multiplication by them. As we may multiply the unit any number we please, and get an exact result, so we may divide by any number we please, and it is physically possible to obtain an exact result. Therefore, the common fractions are the correlatives of ordinary multiplication in the denary scale.

29. But in decimal fractions that is not so. In these the only divisors allowed are 10, and powers of 10. Hence, while we may multiply by any number whatever, we must only divide by powers of 10. Thus instead of our divisors being unlimited, like our multipliers, they are restricted to a very small number indeed. And this consequence follows, that it is physically impossible to divide a unit exactly into any aliquot parts which are not some powers of the factors of 10.

That is, a unit cannot be divided exactly in decimals by any number which is not of the form $2^{p} \times 5^{q}$.

30. Now, the immense majority of numbers are not of this form at all, and consequently it is a matter of physical impossibility to divide a unit exactly by the immense majority of numbers.

31. To shew how very few they are, we will shew how extremely few there are in the natural numbers up to 1,000, by which a unit can be exactly divided by decimal fractions.

Taking powers of 2, we have—

1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1,024, &c.

Taking powers of 5, we have—

1, 5, 25, 125, 625, 3,125, &c.

Now a unit cannot be divided exactly in decimals by any number except those in these two series, or those arising from

the multiplication of any one in the one series by any one in the other.

To shew how extremely few they are, we have only to see how many there are up to 1,000. We shall find that there are only 28 numbers up to 1,000, in which an exact division is possible. They are, 2, 4, 5, 8, 10, 16, 20, 25, 32, 40, 50, 64, 80, 100, 125, 128, 160, 200, 250, 256, 320, 400, 500, 512, 625, 640, 800, and 1,000.

32. Now, what should we say to a system of multiplication in which it was a physical impossibility to obtain an exact result in the immense majority of cases? What should we say to a system of multiplication in which it was physically impossible to multiply a unit exactly by 3, 6, 7, 9, 11, 12, &c.? It is clear that such a system could not be tolerated for a day.

33. Now, such a system as that would be the correlative of decimal fractions. It would be one in which we were forbidden to multiply by any numbers except 10, and powers of 10; and therefore no multipliers which were not of the form $2^p \times 5^q$ could bring out an exact answer.

34. Hence we see that the analogy between decimal numbers and decimal fractions entirely fails. In fact, they proceed upon different principles; and it is manifestly the same with any fraction expressed in the radix of the scale of notation.

The unit may be multiplied by any natural number whatever. But it can only be divided by powers of the radix. Consequently, it can be divided exactly by no natural numbers whatever, except those composed of powers of the factors of the radix.

35. Hence we see at once, that there is a fundamental distinction between addition or multiplication in the denary scale, and decimal subdivisions, or decimal fractions. For all cases of addition or multiplication, nothing can be better than decimals, but for all cases of subdivision nothing can be worse.

36. The cases, therefore, of a coinage, in which the unit is the lowest possible, and therefore proceeds by multiplication, and

that in which the unit is the highest possible, are not only not parallel, but they involve principles which are antagonistic to each other. Where nothing but physical multiplication is wanted, nothing can be better; but where physical division is required, decimal fractions are impracticable.

37. Hence we see at once, that the analogy between coinages of the third system and those of the first entirely fails, and what is the best in the first is impracticable in the third.

38. We have said that the essential peculiarity of decimal fractions is, that the unit cannot be divided into any aliquot parts, except those proceeding by powers of 10. Now this is a restriction that no people would ever submit to in the common affairs of life. We constantly require to divide things exactly into 3, 6, 7, 9, 11, 12 parts. No one would ever dream of proposing that persons should voluntarily preclude themselves from dividing a quantity into any exact parts under 1,000, but those of the 28 numbers above given. But that is what we should do if we were to adopt decimal sub-divisions exclusively. Such a notion is so monstrous, that no one out of Bedlam would propose it. It would be just as rational as to suppose that we should adopt a system of multiplication in which none but these figures should produce exact results.

39. Now it would be the state of greatest perfection if we could imagine the unit of value, such as gold, to be some soft substance like putty, which we could subdivide into any number of parts whenever we pleased. But as that is impossible, the next best thing is to have it divided into that number of pieces which contains the greatest number of divisors possible. Now, 10 is not only not good, but it is extremely bad.

40. Now, considering that the present unit of the English coinage is of gold, and of its existing magnitude, it is quite easy to shew that there is no division of it at all comparable to that of 20, 12, and 4. No other combination within the same compass presents such a richness of factors. For it has no less than 26 factors, namely:—2, 3, 4, 5, 6, 8, 10, 12, 15, 16, 20, 24, 30, 32, 40, 48, 60, 64, 80, 96, 120, 160, 192, 240, 320, 480; whereas

1,000 has but 14 factors—2, 4, 5, 8, 10, 20, 25, 40, 50, 100, 125, 200, 250, 500. Hence the immense superiority of the present division of the pound sterling over that of the millesimal one for all purposes of physical division is manifest.

41. Moreover, every one's daily experience shews that while he naturally uses the decimal scale for multiplication, he never thinks of confining himself to decimal expressions for sub-division. People want, every-day, halves and quarters, and half-quarters of things, and they call them so. But if we are to have decimal fractions exclusively, these expressions must be given up. A snuffy old woman in the Highlands wants a quarter of an ounce of snuff: she must no longer ask for that, but she must ask for a 25-100th of an ounce! And so on. A nation of savans might do that, but common humanity never will. We want a half or a quarter of a thing. The eye performs the work instantaneously. But if we go to decimal fractions, we must first of all divide the whole unit into 10, or 100, and then take 5 or 25 of these parts. Such a statement shews the manifest absurdity of such a thing.

42. The fact is, the whole confusion is based upon the supposition that decimal fractions are analogous to decimal integers, which is a complete delusion; and if this distinction in principle had been fully considered, the question never would have been agitated at all.

43. Considering, therefore, these fundamental differences of principle between decimal fractions and decimal numbers, and decimal multiplication and decimal division, we may state the following as ascertained principles with respect to a coinage:—

1st. Where the unit of account is the lowest coin in common use between man and man, and the whole coinage consists of multiples of that unit, the decimal system is by far the best.

2ndly. Where the unit of account is a coin of some low magnitude, the decimal system will have some conveniences and some inconveniences. And as the unit becomes larger, the practical inconveniences will constantly increase over the advantages.

3rdly. Where the unit of account is very high, and placed far above the immense majority of transactions, the decimal system,

which then becomes one of almost entire subdivision, is an intolerable nuisance, which could never subsist for any time at all.

44. From these considerations we see that it would be practically impossible to adopt any system of decimal coinage in this country so long as the pound sterling is the unit of account, and the coinage is one of pure sub-division.

Other schemes have been proposed, based upon the penny and the farthing. Of these we shall say something hereafter.

45. It is unquestionable that, for matters of account on paper, especially in large numbers, the decimal system affords an immense superiority. It is no doubt true, that it is physically impossible to divide anything into 3, 6, 7, &c., parts, by decimals. We can, however, carry it as near exactness as we please. The philosopher can afford to balance this inconvenience against the other many advantages, and carry his calculations a few figures further with equanimity, when he knows that the ultimate result will come as nearly true as he pleases. But it is a far different matter with the daily transactions of life, where actual physical sub-division is required, and where the differences which arise from an imperfect division give rise to everlasting and perpetual quarrels. No man who has not studied history can conceive the intolerable practical misery that a depreciated currency causes to a people; and the very same effects are produced by an imperfect system of subdivisions. We shall have ample evidence of the truth of this in the course of this section. We shall now give some historical notices of the adoption of the decimal system of coinage by different nations.

Of the Decimal System of Coinage of the United States.

46. The currency of the various American colonies was originally the same as that of the mother country. But we have shewn elsewhere that nearly all the States had issued enormous masses of paper currency, the effect of which had been to depreciate the pound in them. In each State, too, the pound had undergone a different degree of depreciation; hence there was, at the time of the Revolution, an immense confusion between the currencies of the different States. The weight of

the pound sterling was 1,718¾ grains of pure silver; but the pound of Georgia was 1,547 grains; that of Virginia, Connecticut, Rhode Island, Massachusetts, and New Hampshire was 1,289 grains; the pound of Maryland, Delaware, Pennsylvania, and New Jersey was 1,031¼ grains; and the pound of North Carolina and New York was 966¾ grains.

47. While, therefore, the pound, shilling, and penny had different values in different States, the Spanish dollar had a general circulation throughout all the States, but with a different rating. In the New England States and Virginia, it passed for 72 pence; in New York and North Carolina, for 96 pence; in the Middle States, for 90 pence; and in Georgia and South Carolina, for 56 pence.

48. When the Congress was formed, they found it necessary to issue a paper currency, to carry on the war. If this had been based on the pound, it would have caused intolerable confusion; besides there was no reason why the pound of any particular group of States should be preferred to the others. Congress therefore adopted the plan of basing their paper on the Spanish dollar, which had a general currency throughout the States. And when the national independence was secured, as it was necessary to have a national currency, the dollar was naturally adopted as the national unit in 1785.

49. Mr. Robert Morris, the Financier of the American Revolution, seems to have been the first who brought forward a scheme for a decimal coinage. On the 15th of January, 1782, he laid before Congress an exposition of the plan. He proposed to have an exceedingly *small* unit, and that the coins should be increased in a decimal ratio, so as to afford an easy calculation. This unit need not be a coin, but was to be a quarter of a grain of pure silver. The lowest silver coin should be 100 of these, and be called a *cent*. To this 2 grains of copper were to be added, so that the coin should weigh 1 dwt. 3 grs. Five of these were to make a *quint*, or 500 units, and 10 to make a *mark* or 1,000 units. This plan was not carried out, Mr. Morris having resigned, and Mr. Jefferson, to whom the matter was referred in 1784, considering the unit too small. Mr. Morris him-

self subsequently modified it by adopting a larger unit, which he assumed to be 12s. 6d. sterling. This he called a pound, and divided by 10 in a decimal ratio, making the pound 1,000, the shilling 100, the penny 10, and the doit 1. It was found that the currencies of all the different States might be reduced to this common measure. The table of coins proposed in connection with this system, was—the crown, of gold, of 1,200 doits; the half-crown, 600 doits; the dollar, of silver, 300 doits; the shilling, 100 doits; the groat, of 20 doits; and the copper doit. Thus we see that, though the accounts were proposed to be decimal, the coinage was not decimal, but *binary* and *ternary*. In 1786, Congress adopted Mr. Jefferson's plan, and adopted a system of coins of these names: an *eagle*, to contain 246·268 grs. of fine gold, to be equal to 10 dollars: a *half-eagle* of similar proportions; a *dollar*, of silver, to contain 375·64 grs. fine; *half-dollars* of similar proportions; a *double dime*, of 75·128 grs. of silver; *half dimes*, and *cents*, of copper, the 100th part of the dollar, and *half-cents*. Thus, here we see the units divided into *halves*.

50. This report was presented to Congress, but no action was taken on it. In 1790, it was referred to Mr. Alexander Hamilton, the Secretary, and in the next session he presented an elaborate report upon it. He adopted the dollar as the unit, but contended that it should not be attached either to gold or silver exclusively. He proposed that it should correspond to 24¾ grs. of pure gold, or 371¼ grs. of pure silver, each to pass for 1 dollar in the money of account; the alloy of each to be 1-12th, making the unit 27 grs. of standard gold, and 405 grs. of standard silver. These proportions for the coins were adopted, and an Act to establish a mint and regulate the coins was passed in 1792. The alloy was fixed at 1 part in 12 for gold, and for silver 179 parts alloy, and 1,485 fine. This proportion, however, was altered in 1837, when the alloy both of gold and silver was ordered to be one part in 10.

51. The introduction of the decimal system into the American coinage was considered as a great triumph of science, and its authors boasted that it had met with the boundless approval of all eminent men in America and Europe. If, therefore, it had

been found in practice so very beneficial, we should naturally have expected that, during the period it has been in force, now just 80 years, it would have entirely superseded the former system of pounds, shillings, and pence, and the binary division of halves, quarters, eighths, &c. We should have expected that the existence of the former system would only have been known to professed antiquaries, who might have looked upon it somewhat in the same light as geologists do the extinct races of animals. And as for the common people, they never could have been expected to have heard of it at all. But is this the fact in practice? It is found not to be so. By law, the dollar is divided into dimes, cents, and mils. But it is found in practice that the cent being taken as the unit, while calculations upwards are reckoned decimally, those *downwards* invariably proceed on the old binary scale; while the law declares that there shall be no division of the cent, except by 10, universal mercantile custom invariably proceeds by halves, quarters, eighths, &c. The mil is utterly ignored. Thus, Mr. Slater placed before the Decimal Coinage Commissioners, as an ordinary specimen of mercantile news, the following extract from a New Orleans Price Current:—"Louisiana sugar, of fair to fully fair quality, is quoted at 7 to $7\frac{5}{8}$ cents per lb.; ginger at 6 to $6\frac{1}{8}$ cents per lb; tobacco at $7\frac{1}{8}$ and $8\frac{3}{8}$ cents per lb.; (and also, *exceptionally*, among a multitude of quotations, exhibiting binary subdivisions, at $7\frac{8}{10}$ and $8\frac{7}{10}$ cents), Green meat (pork) found purchasers at $7\frac{1}{8}$ cents per lb.; and lard at $9\frac{3}{8}$ to $9\frac{5}{8}$ cents. On cotton, the advance within the week has been fully $\frac{3}{8}$ to $\frac{1}{2}$ cent per lb., whilst freight to Liverpool was taken at $\frac{5}{16}$ to $\frac{3}{8}$ cents this year, against $\frac{1}{4}$ to $\frac{11}{32}$d. in 1855, and $\frac{13}{16}$ to $\frac{7}{8}$d. in 1854. To Havre, cotton is taken on freight at $\frac{5}{8}$ cents. A ship was taken for Bordeaux at $\frac{15}{16}$ cent, and at Boston at $\frac{7}{16}$ cent." No freights were quoted at decimal rates. Among the articles fluctuating in price by $\frac{1}{4}$ cents, were found almonds, bacon, bagging, coffee, hides, lead, rice, soap, spirits.

52. Thus, we see, taking this as a specimen of the mercantile custom in America, that commercial instinct obstinately rejects the decimal division, notwithstanding it is thrust upon them by law. And is it possible to conceive they would not long ago have adopted it without any law at all, if it had really been more

suited for their purpose? just as some commercial establishments in this country have adopted decimals in their business, because it answers their purpose, without any law at all. And no wonder, for the binary subdivisions being found to be those most convenient for commercial purposes; 4ths could not be expressed in less than two figures, 8ths in less than three; 16ths in less than four; 32nds in less than five; and 64ths in less than six. Thus, for instance, in the above extract, $\frac{5}{8} = \cdot 625$; $\frac{13}{16} = \cdot 8125$; $\frac{11}{32} = \cdot 34375$. What memory could stand such complexity? In the first place, it would be necessary to recollect that three figures in the quotation meant 8ths; four figures meant 16ths; and five figures meant 32nds; and then all the varieties of these fractions. This example shows that, for physical subdivision, decimals are intolerable.

53. Commercial instinct, therefore, utterly condemns decimal subdivision. But does the common practice of small dealers of all sorts support it any better in common life? The evidence before the Commissioners as decisively disproved that notion. During all this long period of 70 years, it has been found impossible to extirpate the old reckoning by shillings and sixpences. Professor Kelland, Dean of the University of Edinburgh, travelled extensively through the States, and gave in a most valuable paper to the Commissioners. When a nation adopts a decimal coinage, it would naturally be expected that they should adopt decimal weights and measures. Indeed, some of the scientific witnesses examined before the Parliamentary Committee and the Commissioners, seemed to think that there was very little use of one without the other. But the Americans have not decimalized their weights and measures; they still retain the old ones they learnt from the mother country. How is this, if decimalization be so good? Still more should we expect that they would have made up their parcels in shops in tens, instead of dozens, to accommodate their money; but they have not decimalized their parcels. Professor Kelland says, — "The decimal system has been the legal system in America for 60 years, and dozens have not yielded a hair's breadth as yet. The same paper from which I quote, contains Valentines, in lots of 144, 36, 24, 18, 12, and 3, but no tens." In a Cincinnati paper, there were advertised for sale, 100 dozen jars, 100 dozen glass,

100 dozen cans. Shillings were the sums charged in Philadelphia, in the hotel bills. This appeared very strongly, too, in the book catalogues. The prices, though expressed in cents, were in reality accommodated to shillings. Some were marked 69 c., which in reality meant 5s. 6d., New York; others 63 c., which meant 5s. New York, the New York shilling being 12½ cents. The New England shilling was 16⅔ cents. On examining 12 pages of the catalogue, decimal prices were marked in 40 cases, and non-decimals in 117. Among book prices, 38 and 31 cents were most frequent, being remarkable numbers to choose if there were no particular reason for it. The fact was, the former number meant 3s., and the latter 2s. 6d. New York.

54. Nor was this opinion unsupported by intelligent natives. The Rev. Joshua Leavitt, editor of the *Independent*, of New York, stated to the Committee of the Canadian Assembly, in 1855,—"I have no doubt of the superiority of the decimal system for the purposes of account; but for all the purposes of small circulation, in marketing, huckstering, and the like, I am persuaded that a duodecimal currency, like that of England, or like that which formerly prevailed in the city of New York, is far preferable. These small transactions of daily life outnumber the transactions of commerce almost infinitely, and it seems impossible to make a decimal currency as convenient in these as in the old currency. One reason is, that the decimal currency admits of only one aliquot division, that is, into halves." Mr. Leavitt then shews the excessive inconvenience of this want of divisible power. He also said—"You are aware that in our (*i. e.*, New York) marketing, and other small transactions, our business is still done in shillings and pence, the shilling being one-eighth of a dollar, and therefore corresponding exactly in its value to the old Spanish coin of one eight. The provincial currency of New York, before the Revolution, was framed upon the reckoning of 8s. to a dollar; and when the Federal currency was introduced in matters of coin, the common people still clung to the old shilling as a matter of necessary convenience in their pocket payments; and the experience of *sixty years* has not in the least diminished their attachment to this method of reckoning in small payments. * * * * And not only this, but we find the people of all parts of the country are learning more and

more to use the vernacular currency of New York in their daily chaffering, from one end of the United States to the other. You will frequently hear people giving you the price of things in York Shillings and York sixpences. I think this experiment is conclusive, and ought to be satisfactory to prove that the duodecimal currency in small transactions is a great public convenience. I am sure it is only this actual and felt convenience which has enabled it to maintain its ground for 60 years. * * * * For myself, I have no idea that we shall ever abandon the shilling currency; the lapse of generations has only fixed it more firmly upon us, and I fully believe that in a few years we shall have a Congress so governed by common sense, and so alive to the convenience and welfare of the people, that they will legalise the York shilling and sixpence, as the eighth and sixteenth of a dollar, and will give us from our own Mint a corresponding coinage." The Committee of the Legislative Assembly of Canada reported that coins representing the eighth and sixteenth of a dollar, were indispensable in small transactions in Canada; these coins being quite incompatible with a decimal coinage.

55. The introduction of a decimal system of coins into France, was easier than almost any other nation. The French coins, like those of Western Europe, were divided into livres, or francs, sols, and deniers. But the successive depreciations had brought the livre, or franc, down to below 10d., the sol was in fact equal to ½d., and the denier had altogether ceased to exist as a coin. The franc and the sol were therefore all that were wanted. It was only to call it five centimes instead of one sol, and the thing was done. Nevertheless, slight as this change was, it was effected with inconceivable slowness, if indeed it can be said to be done yet. The name of the livre was abolished, but that of franc retained. In order to make it weigh 5 grammes, it was found necessary to increase its weight by 1-80th part. Slight as this difference was, it gave rise to great disturbance. Dr. Gray says, "Even now, at the distance of more than half-a-century, it is by no means universally adopted in France, either in accounts, or still less in the great mass of ordinary retail dealings. As long as the old livres remained in circulation, whenever they were tendered in place

of a franc, it became a constant source of contention which party was to be the loser by the bargain; one or the other must be so, as there was no coin to represent the actual difference, and the debate frequently ended in the weaker party giving two centimes, or one fiftieth-part instead of one eightieth part over and above the livre; or as a centime was a rarity seldom seen, a livre and a sol were combined to represent a franc, and thus the receiver obtained three and three quarters per cent. beyond the real value of the new coin as compared with the old." Dr. Gray says that even now accounts are still frequently kept in livres, sols, and deniers, in the provinces, and even in Paris itself the prices of most of the common and smaller articles are constantly expressed in sous. *Galignani's Messenger* is marked ten *sous*, not fifty centimes, or five decimes. In 1856, an ordonnance was issued to prevent people crying articles in the streets in sous! So long do the old habits of the people on so small a matter continue against all the efforts of a powerful government.

56. The French introduced their decimal system of monies into Sardinia in 1793. The *lira* was diminished to an equality with the franc; 100 old Piedmontese *lire* being coined into 118¾ new lire, or francs. The Sardinian money is now in all respects the same as the French, the coins of the two countries passing freely in each other. This change was continued by the restored dynasty, after the overthrow of the French Empire. By laws of the 12th of August and 7th September, 1816, and 4th and 9th December, 1820, the new lira was declared to be the money of account, and all contracts were ordered to be made in that coin. In 1827, this system was extended to the Duchy of Genoa, and in 1843 to the island of Sardinia. And since the unification of Italy, the French system of coinage has been adopted throughout the country.

57. The French introduced the decimal system into Belgium in 1803. It was suppressed in 1816 in favour of the decimal system of the Netherlands, but the French system was restored in 1832. Before 1803, there were four distinct systems of coinage legalized, and in common use; namely, the Flemish livre containing twenty schillings, each schilling twelve gros, each

gros, eight penninghens, and each penninghe three myten. This money was used chiefly for calculating the foreign exchanges, especially that upon London, and was continued so late as 1843. The great commercial houses kept their accounts in florins, divided into 20 sous, and each sol into sixteen deniers. This was also used in the exchange on Amsterdam and Hamburg. The Brabant florin, containing twenty sous, and each sol into twelve deniers, was the money used in the transactions of daily life. And lastly, the government accounts were kept in livres tournois, divided into twenty sols of France, and each sol into twelve deniers. It is not surprising that the establishment of a single uniform system like the French was found to be a great improvement over such complication. But even here the immense time necessary to change the habits of a people is seen. The higher commercial classes in the cities keep their accounts in francs and centimes, but the old division of Brabant-guilders and stivers are still maintained by the small tradesmen and shopkeepers, though these coins have no monetary representatives. In usual life, every man in Belgium is compelled to have constantly at hand his tables of reduction of the various monies, both past and present.

58. Up to 1848, the Swiss coinage was in a state of fearful confusion. Each Canton coined money for itself, which would not pass in the neighbouring ones. Numerous coins from France and Germany also passed current at different denominations. The Federal constitution of 1848 took away the power of the Cantons to coin money, and placed it in the hands of the Federal authorities, and demanded a monetary reform. In 1850, a new Federal law on coins was passed, which was brought into effect during 1851 and 1852. The moneys of account and usage were assimilated to the French, and all the old ones withdrawn and destroyed. What an enormous improvement this was, may be judged by the answer of Mr. Trümhler to the Decimal Coinage Commissioners, who says that before 1850, there were current "all kinds of German dollars, German florins, Austrian zwanzigers, French five-franc pieces, subdivisions of the above, and about 160 different Swiss coins. The legal value of most coins was different in almost every Canton; and the current value differed everywhere from the legal value!" Thus the same coinage

circulates throughout France, Belgium, Switzerland, and Italy, to the immense relief of travellers.

59. The late kingdom of the Two Sicilies had a coinage of which the ducat was the unit, divided into 10 carlini, and each carlino into 10 grains, and each grain into 10 calli. But accounts were kept only in ducats and grains. Payments, however, were seldom made in ducats, which was a very rare coin, but in Neapolitan dollars, worth 12 carlini, or 120 grains. And here we have a curious example of a decimal system of accounts, with a duodecimal coinage. For the coins in circulation were the dollar of 12 carlini, or 120 grains; half-dollars of 6 carlini, or 60 grains: pieces of 4 carlini, 3 carlini, 2 carlini, 1 carlino, and half a carlino. Copper coins are in common use, of half a carlino, 4, 3, $2\frac{1}{2}$, 2, $1\frac{1}{2}$, 1 grain, and half a grain.

This is a very strong and striking example of what we said above, that as soon as the unit of money becomes of any magnitude, the practical purposes of life irresistibly demand a *duodecimal* coinage. The very same thing as is manifested in America.

60. The Netherlands, like most other countries, were afflicted with great monetary confusion. The basis of the whole, however, was the florin, containing 20 stivers, or 20 pence English. In 1821, this coin was taken as the unit of the system, and divided into cents and half-cents. In this case we observe the transitions was extremely easy. The stiver was already the 20th part of the florin, and its name was simply changed into 5 cents, as in France. Hence nothing new required to be done; it was simply to abolish a number of the old coins.

61. Portugal is an example of a country having a single unit, like that of China, and all the coins being multiples of that unit. The Portugese unit is the rei, being equal to $\frac{4}{7\frac{1}{5}}$ of a penny. The smallest coin is the 5 reis, or $\frac{4}{1\frac{1}{5}}$ of a penny. But though all the moneys of account were decimal multiples of the rei, the coinage was not so. The coinage consisted of moidores of 4,800 reis; crusadoes, 400 reis; cruzados novos, or pinto, 480 reis; quartinhos, 1,200 reis; testoons, 130 reis; and vintems, 20 reis. This coinage has, however, now been abolished, and it has now

been decimalized, as well as the accounts. The change came into operation in 1857.

62. In Russia, the silver ruble is the standard, being about 37 or 39 pence. This is divided into 100 copecks, and the copeck is divided into halves and quarters. The silver ruble was established as the unit of money in 1840, in place of the ruble of assignation, to which the issues of depreciated paper had reduced the Russian standard. The silver ruble was equal to $3\frac{1}{2}$ paper rubles, but the sub-divisions of the latter were the same. And here we perceive that as soon as it went below cents, the binary division was found necessary.

63. In Greece the drachma is the unit, being in value about $8\frac{1}{4}$d.; this is divided into 100 lepta, the latter being about $\frac{1}{3}$ of a farthing. The drachma, however, is an imaginary coin, and foreign coins of gold and silver are current at a regulated value. The only Greek coinage is copper. Hence, although accounts are kept decimally, there is in reality no decimal coinage. Drachmas, half and quarter drachmas, are supposed to exist. Here we see as usual binary division for practical purposes.

64. Such are the examples of actually existing decimal systems both in accounts and coinages, and we shall find that they will throw much light upon the important question whether it is expedient to decimalize the coinage of this country. We observe then, that the highest unit in a decimal system of coinage is the American dollar, which is divided nominally into dimes, cents, and mils. But practically, the only moneys of account are dollars and cents. The next highest was the Neapolitan ducat, $41\frac{1}{2}$ pence, divided nominally into 10ths, 100ths, and 1,000ths. But in practice the accounts were kept in ducats and grains only. The coinage was entirely duodecimal. The next highest unit is the Russian ruble, about 38d., both nominally and in practice, divided into 100 copecks; but the copeck is divided into halves and quarters.

Then comes the Netherlands, with its unit of 20d., divided into cents, and these into half cents. Then the French, Swiss, Belgian, and Italian unit of 10d, nearly, divided nominally into decimes, centimes, and millièmes, but practically only into francs

and cents. Here the centime is a coin so much below all ordinary use that there is no occasion for its division, and whether in commercial transactions it is so or not, we have no information. Then comes the Greek unit, also divided into 100ths; and lastly, the Portuguese unit, which is below the purposes of common life, and, therefore, does not require division. In all of these we observe that practically people refuse to go below cents in their accounts; so that we may fairly consider them as the pivots of the coinage, and whenever they go below cents in business, they invariably reject the decimal division, and adopt a binary one. And this becomes clearer as the nominal unit becomes larger.

65. The question of decimalizing the coinage and accounts of this country has been mooted at various times. In 1816, a Royal Commission was appointed to consider the possibility of establishing a more uniform system of weights and measures. They reported that the existing sub-division of weights and measures was far more convenient for practical purposes than the decimal scale. In 1824, Sir John (afterwards Lord) Wrottesley brought forward a motion in the House of Commons for inquiring into the applicability of the decimal system to coins. He proposed pounds, double shillings, and farthings, reduced four per cent. in value; in fact, what is now known by the name of the pound and mil scheme. The motion was, however, withdrawn, and the currencies of England and Ireland were soon afterwards assimilated. The standards of weight and measure were lost when the Houses of Parliament were burnt, in 1834, and in 1838 a Commission was appointed, consisting of the Astronomer Royal (Mr. Airy), the President of the Royal Society (Mr. Francis Baily), Mr. J. E. Drinkwater Bethune, Sir J. W. F. Herschel, Bart., Sir J. G. Shaw Lefevre, Sir J. W. Lubbock, Bart., the Very Rev. George Peacock, Dean of Ely, Lowndean Professor of Astronomy, and the Rev. R. Sheepshanks, all men distinguished in science, but not one having any practical knowledge of commerce. The Commissioners reported in 1841, strongly recommending the decimalization of the coinage, on the same system as already proposed by Sir John Wrottesley. In 1843, a second Commission was appointed, containing the names of the Astronomer Royal, Sir John Herschel, Sir

J. G. S. Lefevre, Sir J. W. Lubbock, the Dean of Ely, and Mr. Sheepshanks, members of the former Commission, to whom were added, the Marquis of Northampton, President of the Royal Society; the Earl of Rosse; Lord Wrottesley; and Professor Miller. The Report of this Commission, composed exclusively like the former of men of science, agreed with the former, and proposed to carry out its recommendations.

66. In 1847, a motion was made in the House of Commons, by Sir John Bowring, on the 24th April, for an Address to the Crown in favor of the coinage and issue of silver pieces of the value of 1-10th and 1-100th of the pound sterling, in order to introduce the decimal subdivisions of the coinage. The motion was withdrawn, on the engagement of the Chancellor of the Exchequer that pieces of the value of the tenth of the pound should be coined. This was done, and these pieces called florins, are now in general circulation.

67. On the 26th of March, 1853, the Commissioners of 1843, hearing that a coinage of copper was in contemplation, addressed a letter to Mr. Gladstone, then Chancellor of the Exchequer, strongly urging upon him that this copper coinage should be in pieces of the value of 1-1000th, 2-1000ths, and 4-1000ths of a pound, being 4 per cent. below the present farthing, half-penny and penny, with the view to the introduction of the decimal system. On the 5th of April, Mr. Gladstone was asked in the House of Commons whether it was the intention of Government to carry out the decimal system, by coining the new copper money on that scale. The Chancellor replied that there was no intention on the part of the Government to make any change in the copper coinage. Nevertheless, considering the great importance of the subject, they would support the motion for a Committee by one of the members. Accordingly on the 12th of April, on the motion of Mr. W. Brown, member for South Lancashire, a Committee was appointed to consider and report upon the expediency or otherwise of adopting a decimal system of coinage.

68. This Committee examined twenty-five witnesses, all of whom were in favour of a decimal system of coinage, and recom-

mended the pound and mil scheme, as the plan of the former Commissioners was called, with the exception of Mr. Headlam, member for Newcastle, who strongly urged the expediency of making the ¼d. the basis of the coinage, and multiplying from that unit. This would make the pound sterling equal to £1 0s. 10d. The Committee made their report on the 1st of August, strongly recommending the adoption of the pound and mil scheme. They recommended the withdrawal of the half-crown, the 3d. and 4d. pieces, and the introduction of copper coins of 1, 2, and 3, mils, and silver coins of 10 and 20 mils.

69. The Report of the Committee excited much discussion in the newspapers and among the public, and was followed as usual by a great eruption of pamphlets. But a most extraordinary difference of opinion soon manifested itself among the zealous advocates for a decimal system. No less than eleven different schemes were brought forward, and urgently pressed, all based on some particular coin of the existing moneys. Most of them, too, were hostile to the adoption of any rival scheme, and preferred to maintain the existing coinage rather than have any plan but their own adopted. These rival schemes introduced greater complexity into the question. In 1855, the House of Commons passed a resolution, by 135 to 56, in favour of the further extension of the decimal system. But, before finally deciding, the Government referred the whole matter to a Commission, composed of Lord Monteagle, Lord Overstone, and Mr. J. G. Hubbard. This Commission made a preliminary report in April, 1857, signed by all its members. They examined a number of witnesses, who were adverse to the pound and mil scheme, and they prepared a series of questions to be addressed to eminent persons who lived in foreign countries, where the decimal system was already in use. Moreover, Lord Overstone prepared a series of questions, framed with a view of bringing into distinct notice and examination some of the advantages of the present system of coinage, and some of the principal difficulties and objections which have been suggested as attending the introduction of a system of decimal coinage.

70. The evidence given before this Commission, together with the experience gathered from foreign countries, and the

answers to Lord Overstone's questions, may be said to have completely changed the aspect of the question, and to have conclusively settled it against the decimalization of the English coinage. Lord Monteagle retired from the Commission, and the final report was delivered on the 5th April, 1859, signed only by Lord Overstone and Mr. Hubbard. The conclusions which they jointly arrived at were, that the experience of foreign countries, where the decimal coinage had been introduced, was full of instruction and warning to us; but the circumstances of this country were so different that no safe conclusion could be drawn from them. That commercial men as well as others were greatly divided on the subject. That it was difficult to come to any useful conclusion as to the merits of the decimal system in the abstract, and distinct and peculiar difficulties attended each separate form proposed for adoption. That the penny scheme had many advantages over the pound and mil scheme; nevertheless that the state of public feeling would not allow the pound to be disturbed. That as regarded the pound and mil scheme, there appeared to be an advantage in calculations, though the extent of the advantage was much disputed. That with regard to the reckonings of the shop and the market, and for mental calculations generally, the present system was unquestionably the best, as well as regarded the coins, provided by the rival schemes. That the pound and mil scheme could not be looked upon as a demonstrative improvement but rather as a doubtful experiment, attended with many transitional difficulties, partly of a moral character, arising from the difficulty of changing established usages and habits, and partly mechanical, arising from the non-interchangeability of the old and new coins. The advantages of decimal accounts might be attained without disturbing the coinage, by a more extensive use of the practice now adopted at the National Debt Office, and the principal Assurance Offices. That under existing circumstances, it was not desirable to disturb established habits by an attempt to introduce any new principle into the coinage alone.

71. These were the joint resolutions adopted by the two Commissioners. But Lord Overstone prepared a draft report, most ably and fully discussing the evidence obtained by the

Commissioners, and weighing the alleged advantages and disadvantages of each scheme with perfect impartiality. The clear and convincing way in which the question is argued in all its different bearings, may be considered to have finally disposed of the subject.

The result of this inquiry has also disposed of the question whether it be possible to have an International Coinage. We have seen that it is practically impossible to alter the British Coinage; and certainly it cannot be expected that so large a portion of Europe as have felt the benefit of the French system will consent to alter theirs. A new element has also recently been introduced into the question. Before the recent wars of Prussia against Austria, and Germany against France, there was a great confusion among the coinages of the different German States, and, if things had remained as they were, they might perhaps, one by one, gradually have adopted the French system. But Germany is now consolidated into a single great empire, and it is intended to have a coinage of its own. We believe that the details of it are not yet completely settled; but it is understood that it will not be the French system. We believe that it is intended to issue gold pieces of 20 marks, the exact equivalent of the British sovereign; and so the mark will be equal to the shilling.

CHAPTER VII.

THE THEORY OF CREDIT.

PRELIMINARY REMARKS.
SECTION I. INVESTIGATION OF THE NATURE OF CREDIT.
SECTION II. OF THE TRANSFER OF CREDIT, OR DEBTS.
SECTION III. OF THE LIMITS AND EXTINCTION OF CREDIT.
SECTION IV. OF COMMERCIAL CREDIT.
SECTION V. THE THEORY OF BANKING.
SECTION VI. ON BANKS OF CREDIT FONCIER.

PRELIMINARY REMARKS.

We have now arrived at the consideration of the great subject of Credit, the great marvel of modern commerce. What the Steam Engine is in Machinery, what the Differential Calculus is in Mathematics, that is Credit in Commerce.

In the preceding chapter, we discussed the Theory of the Coinage in which Values were originally estimated. But in this country, and in some others, Credit has superseded Money as a Medium of Exchange to an extent of which few people have the most distant conception: and it is just as impossible to have a correct idea of the Theory of Prices without a thorough knowledge of the mechanism of the System of Credit, as it would be to understand the phenomena of production without considering the effects of machinery.

To understand the subject of Credit, the most important branch of Commerce and Mercantile Law, properly, it is necessary to give a succinct account of the history of Roman Law relating to the creation, the sale or transfer, and the extinction of Debts. Roman Law started from exactly the same principle regarding the transfer of Debts, as is the present Common Law of England; and after many centuries, being moulded by a long series of illustrious Lawyers, was brought to a state of simplicity and perfection, which was declared to be Law, by the Legislation

of Justinian, soon after the beginning of the 6th century. These doctrines were adopted and confirmed in the Revised Code, called the Basilica, promulgated by the Basilian dynasty in the 10th century. The Code of Justinian, therefore, on the subject of Credit, was the Common Commercial Law of Europe, except England, and except where it may have been modified by special legislation in different countries.

The Common Law of England with regard to the transfer of Debts, is exactly what Roman Law was at the time when the Romans abandoned Britain, as stated in the Institutes of Gaius. While Equity, which was for many hundred years administered by Churchmen distinguished for their knowledge of the Civil Law, adopts the more advanced doctrines of the Pandects.

At the present time, Credit is by far the most gigantic species of Property in this country, and the trade in Debts is beyond all comparison, the most colossal branch of commerce. The subject of Credit is one of the most extensive and intricate branches of the Law of Property. The merchants who trade in Debts—namely BANKERS—are now the Rulers and Regulators of commerce: they almost control the fortunes of States. As there are shops for dealing in bread, in furniture, in clothes, and, every other species of property, so there are shops, some of the most palatial structures of modern times, for the express purpose of dealing in Credit: and these shops are called BANKS.

And as there are corn markets and fish markets, and many other sorts of markets, so there is a market for buying and selling Foreign Debts, which is called the ROYAL EXCHANGE. Thus Banks are nothing but Debt shops, and the Royal Exchange is the great Debt Market of Europe.

It was out of discussions on the Nature of Credit that the modern science of Political Economy took its rise, and yet it is the subject which has been least understood by Economical writers. Considering the mighty part which Credit plays in modern commerce, and the effects it has had for weal or for woe upon nations, we should naturally have expected that Economists would have thoroughly worked out the subject, and would have been unanimously agreed upon its nature and effects. So far is this from being the case, that on no subject whatever, if possible, are they more utterly at variance with each other, and with them-

selves. To understand the subject of Credit properly, requires a thorough settlement of nearly all the Fundamental Conceptions in the science, which has hitherto been almost entirely neglected: and in the following chapter we shall see the benefit and the utility of having given so much labour to generalize the Fundamental Conceptions of Economics. It requires a knowledge of some of the most abstruse branches of Law: and indeed to explain some cases in Credit was too much for some of the most eminent judges on the bench. In one case Lord Eldon said—"I think that I argued the case of *ex parte Walker*, and I must say that the speculation about paper certainly outrun the grasp of the wits of the Courts of Justice. This sort of circulating medium puzzled as able a man as ever sat here—Lord Thurlow. . . . . What was to be done then? The Court was puzzled and distressed. At last however we came to an anchorage in that case—*ex parte Walker*. I have no difficulty in saying that I never understood it. I am satisfied that though no doubt the Court understood that judgment, yet none of the counsel did."

Truly says Daniel Webster[1]—"Credit is the vital air of the system of modern commerce. It has done more, a thousand times, to enrich nations, than all the mines of all the world. It has excited labour, stimulated manufactures, pushed commerce over every sea, and brought every nation, every kingdom, and every small tribe among the races of men to be known to all the rest; it has raised armies, equipped navies, and triumphing over the gross power of mere numbers, it has established national superiority on the foundation of intelligence, wealth, and well directed industry." So also an able French writer, M. Gustave du Puynode, says[2]—"However fruitful have been the mines of Mexico and Peru, in which for a long time after Columbus, seemed buried the fortune of the world, there is yet a discovery more precious for humanity, and which has already produced more wealth than that of America: that is the discovery of Credit, a world altogether imaginary, but vast as space, as inexhaustible as the resources of the mind." These descriptions are undoubtedly true; but unfortunately there is a reverse to the

[1] *Speech in the Senate of the United States*, 18*th March*, 1834.
[2] *De la Monnaie, du Credit et de l'Impot*, p. 110.

medal. If credit in modern times, when rightly used, has produced all these wonderful effects; when misused, it has produced catastrophes of a corresponding magnitude. False theories of Credit, and the abuse of Credit, have produced monetary cataclysms, which have shaken nations to their foundations, and whose direful effects have only been equalled by those of the volcano and the earthquake. It, is, therefore, of the deepest national importance to investigate and establish the true Theory of the subject.

The investigation of this subject, moreover, opens up another most interesting branch of inquiry. For considerably more than a hundred years Mathematicians have been in the habit of calling Debts "Negative Quantities." But very few have given any explanation of what they meant by calling a Debt a "Negative Quantity," and those who have attempted it, from the want of knowledge of the principles of Law and the facts of commerce, have completely failed in giving an explanation which can be received as suitable for Economic Science.

It is well known that, though Mathematicians have been in the habit of using the Algebraical Signs for many hundred years, it is only within the present century that the Theory of these signs has been completely worked out. We must therefore explain the Theory of Algebraic Signs, and the principles of their use in Mathematics and Natural Philosophy, and then give an exposition of the *Facts* of Commerce, and then discover what interpretation of these Signs is suitable for the circumstances of Economics.

And when we have combined these things together—an exposition of the *facts* of commerce—an exposition of the Law of Credit—and shewn the application of the Theory of Algebraical Signs to these facts, we shall find a most beautiful exemplification of the use of these signs, strictly conformable to their use in Natural Philosophy. We shall find that the Doctrines of Law, the Practice of Commercial men, and the Theory of Signs, agree with each other. We shall be able to carry the Theory of Credit even to a greater state of perfection than it was left by the Roman Lawyers; and we shall be able to give a complete solution of questions which they did not leave quite in a satis-

factory state. And though we shall give nothing but a simple exposition of the existing mechanism of the system, we shall be able, for the first time, to bring Economic Theory to the level of Commercial Practice, and present results which will startle and amaze our readers.

SECTION I.

INVESTIGATION OF THE NATURE OF CREDIT.

DEFINITION OF CREDIT—ON THE DISTINCTION BETWEEN A BAILMENT AND A DEBT—ON THE AMBIGUOUS MEANING OF THE WORD LOAN—ON CERTAIN ERRONEOUS IDEAS AS TO THE NATURE OF CREDIT—ON THE APPLICATION OF THE THEORY OF ALGEBRAICAL SIGNS TO ECONOMICS.

The Definition of CREDIT.

1. CREDIT, in Legal and Commercial language, is a RIGHT of ACTION against a person for a sum of money.

It is the Name of a species of Incorporeal Property, which is also very frequently termed DEBT in popular language. It would be a great advantage if the words Debt and Credit were distinguished, as we shall afterwards point out: but there does not seem any probability that the popular usage of the word can be amended. Much confusion is undoubtedly owing to the circumstance that the word Debt is used both to denote the Right to demand money, and the Duty to pay money.

Credit is the lowest form of an annuity: it is an annuity of one term: an annuity in general, is the right to demand a series of payments: Credit is the right to demand a single payment.

An operation on Credit in commerce is a Sale, or an Exchange, in which one, or both, the Quantities exchanged is a Debt.

The System of Credit consists in the Creation, the Sale or Transfer, and the Extinction of Debts.

It is divided into two branches—

1st. Commercial Credit; which principally consists in the sale, or exchange, of commodities for Debts.

2ndly. Banking Credit; which consists in the sale or exchange of Money and Debts for other Debts.

Before, however, we proceed to the exposition of the system, we must clear up certain obscurities and ambiguities which are the cause of much misapprehension on the subject.

On the Distinction between a BAILMENT *and a* DEBT.

2. We must now call especial attention to a point of the greatest importance, which may be called the *pons asinorum* of

Economic Science. It is, perhaps, somewhat of a subtle nature, and would not be perceived by any one not conversant with law and commerce. But it is one of those delicate subtleties which occur in all sciences, upon which the most important consequences turn, and it is, in fact, a confusion on this point, which is at the root of most of the false theories of Currency and Credit, which have produced such terrible catastrophes in the world.

There are two species of paper documents which are in general use in commerce, and which have some superficial resemblances—that is, they both convey rights to certain things, and are similarly transferable, and are therefore considered by many to be of the same nature, but which are yet fundamentally distinct in their nature, and in this radical distinction is contained the basis of the Theory of Credit.

These species of paper documents are—

I. BILLS *of* LADING, DOCK WARRANTS, and all other TITLES to specific things.

II. BANK NOTES, BILLS *of* EXCHANGE, and other forms of CREDIT.

In order to show clearly the fundamental distinction between these two classes of paper documents, we will explain how each of them arises.

When a man ships goods on board a vessel, he receives from the captain a paper document, acknowledging the receipt of the goods, and promising to deliver them to whomsoever shall be the owner of the paper. This document is called a BILL *of* LADING.

The shipper of the goods sends the Bill of Lading to the consignee, who, directly he receives it, may negotiate it, *i. e.*, transfer it by indorsement to whomsoever he pleases, in all respects like a Bill of Exchange, and it may pass through any number of hands, and whoever is the owner of it at any time may go and demand the goods from the captain.

Similarly, when goods are deposited in a dock warehouse, the dock master gives a paper document, or a receipt for them, of a similar nature to the Bill of Lading, which is called a Dock Warrant. This is transferable in all respects like a Bill of Lading, or Bill of Exchange, and whoever is the owner of the Dock Warrant is the owner of the goods described in it,

and is entitled to demand and receive them from the dock master.

Now, it is especially to be observed in these two cases that, although the goods are delivered into the temporary custody of the captain or dock master, they have no *property* in them. The *property* in the goods remains with the shipper or depositor, and is transferred by him along with the Bill of Lading, or Dock Warrant. The captain, or dock master, is the mere BAILEE, or TRUSTEE, of the goods, and *not* the OWNER. He has no right to convert them to his own use, and if he did so, it would be a *robbery*, and he would be liable to be punished as a *thief*. Thus the Bill of Lading and the Dock Warrant form *one* property with the goods, and cannot be separated from them. The goods travel *with* the paper document. Thus it may be said in this case that the paper document *represents* goods. In this case there is no *exchange*, and these documents have no *value*, *i. e.*, they are not exchangeable separately. They are not exchangeable for goods generally, but are titles to certain specific goods and no others. No one ever spoke of the *value* of a Bill of Lading, or a Dock Warrant. Such documents are not *Credit*, because the owner of them does not simply *believe* that he can obtain goods in exchange for them, but he *knows* that he has become the owner of certain specific goods. Such a transaction is not an exchange, but is what is called in law a BAILMENT.

So also a man may take a bag of money to his Banker, and may ask him to take care of that specific money, and give it back to him, or any one else he may name, on demand. In such a case, no *Property* in the money would pass to the Banker. He would have no right to use it for his own purposes, and if he did so, he would be guilty of theft. If he gave a receipt for it, promising to deliver it to whomsoever it might be transferred, that receipt and the money would be *one* property as in the case of Bills of Lading and Dock Warrants. The money and the receipt could not be separated, and the property in that very money wonld always pass along with the receipt. The Banker in such a case would be merely the BAILEE, or TRUSTEE of the money, and not its OWNER. In the cases of the captain, the dock master, and the banker above described, the relation of Debtor and Creditor does not arise between them and the owners of the paper documents.

But this is not the ordinary case of a Banker and his customer. When a customer pays in money to his account at his Banker's, the *Property in the money passes absolutely to the Banker.* He is not the *Trustee*, or *Bailee* of the money, but he becomes the OWNER of it, and is entitled to use it in any way he pleases, for his own purposes. In *exchange* for this money, he creates a CREDIT in his customer's favour, promising to deliver an equal amount of money on demand. This transaction is, in fact, an *exchange*, or a sale. The Banker *buys* the money from his customer, by *selling* him the right to demand an equal quantity of money at any time he pleases. Here, therefore, a NEW PROPERTY is created. The customer may transfer this property to whomsoever he pleases, and it has *value*, because the owner of it can *exchange* it for money, or anything else. It is called CREDIT, because the owner of it only believes he can obtain money in exchange for it, but it is not appropriated to any specific sum of money. The Banker is not the trustee of the money, but he becomes the *debtor* to his customer, and, if unfortunately he should happen to fail, his customers, or creditors, are only entitled to have his property divided among them, and they must take their chance of having their debts paid in full.

It is exactly the same in all cases of Credit. If a merchant sells goods on credit, it is absolutely essential to the nature of the transaction that he should part with the property in the goods to the buyer, and receive only the abstract right to demand payment. Without the cession of the Property there is no Credit.

Hence we see the radical and fundamental distinction between Bills of Lading and Dock Warrants on the other hand, and Instruments of Credit of all sorts on the other.

Bills of Lading and Dock Warrants are absolutely bound down and fixed to certain specific goods, and cannot be separated from them, and therefore they form only ONE property with them. They always arise out of a BAILMENT, and never out of an EXCHANGE, and they may justly be said to represent goods. They in themselves are nothing, and are no addition to the mass of other exchangeable property.

On the other hand, it is the fundamental legal requisite of an Instrument of Credit, that it shall be absolutely severed from any specific sum of money. It is even forbidden to be made payable out of any particular fund. It is nothing but an abstract

right against the PERSON, and that is the very circumstance from which it takes its name, because it must be received on the simple *belief* that it can be exchanged for money. If any specific money was appropriated to it, it would not be *Credit*. An Instrument of Credit always arises out of an *Exchange*, and never out of a *Bailment*. Bills of Lading, &c., alway go along with goods &c., Bank Notes, &c., are always exchanged for money, &c. Bills of Lading *represent* goods, but are not of the *value* of goods, because there is no exchange, and there can be no value without an exchange. Bank Notes, &c., do not represent money, but they are of the *value* of money, because in their case there is always an exchange. And Credit, in all its forms, is an addition to the mass of other exchangeable property: as, indeed, is admitted by every Lawyer, every Merchant, and every Economist.

From this it clearly follows that Bills of Lading and Dock Warrants can never exceed in quantity the goods they represent; if any one were to negotiate such documents without any goods to which they were attached, it would be an indictable fraud. But Instruments of Credit, of all sorts, immensely exceed in quantity the money in the country—on the lowest calculation, tenfold. Credit is in itself a merchandize, and the subject of a gigantic commerce. It may be said that all commercial crises arise out of the excessive creation of that species of property called CREDIT. What are the due limits of Credit is a question of the most momentous consequence, which will be clearly shewn in a subsequent section.

It is of the most fundamental consequence to understand clearly the distinction between Instruments of Credit on the one hand, and Bills of Lading and Dock Warrants on the other. Many able Economical writers recently have fallen into the grievous error of classing them together as all being of the same nature, and as Credit. Some of the most terrible financial catastrophes have been caused by adopting systems of paper money founded on this error. It will suffice here to say that John Law's Theory of Paper Money, of which we have given an exposition in a subsequent chapter, was entirely founded on this misconception.

On the Ambiguity in the meaning of the word LOAN.

3. There is still one formidable ambiguity to be cleared away, which has in recent times created immense confusion in the Theory of Credit. All the old writers, who were chiefly men having a practical knowledge of business, seeing that Credit causes exactly the same circulation of commodities as money, maintained the doctrine that Credit is Capital, without entering into any very nice definition of either credit or capital.

Since the time, however, of the French writer, J. B. Say, this doctrine has been the subject of much ridicule. It has been repeated by a multitude of writers, that those who say that credit is capital, maintain that the same thing can be in two places at once. They conceive credit to be the loan of some material substance to some one else, and they ask—How can the same thing be in two places at once, and be used by two persons at once, the borrower and the lender?

In a subsequent chapter we shall point out the astonishing self-contradictions of Say on this subject. It will suffice here to say that the whole misconception is founded on an ambiguity in the meaning of the word LOAN. And the examination of this will show upon what subtle considerations some of the most important doctrines in science depend.

Suppose any one lends his friend some such an article as a book. Then it is clear that the borrower and the lender cannot both have the book at once. Suppose that this person, wanting his book back again, calls upon his friend and finds him not at home. Seeing perhaps his book on his friend's table, he would have no scruple in taking it away; though he would probably have the courtesy to tell his friend he had done so.

But suppose the same person had lent his friend £5, and, as before, wanting it back, called on him, and found him not at home. Suppose he saw his friend's purse on the table, would he feel himself justified in opening it, and helping himself to five sovereigns? Every one would at once feel he would not. He would have no scruple in taking back his own book which he had *lent;* but he would never dream of opening his friend's purse, and taking out five pounds he had *lent.*

Thus, without giving any particular thought to the subject, every one would instinctively feel that there is an essential

distinction between the cases of *lending* a book and *lending* money. Or if he was so obtuse on the subject, the law would tell him so. The law would tell him he might take away his own book if he pleased, but that if he opened his friend's purse and took out five sovereigns, he would be guilty of *theft;* and that he must request his friend to pay him, but that he had no right to help himself.

So if a man pays in money to his account at his banker's, *i. e.*, lends him money, and wants some, would he venture to take it himself off the counter? Of course he would not. He would request his banker to pay him, and he must wait until his banker gives him the money of his own free will. If he ventured to take it himself he might be given in charge to a policeman.

The fact is, that though both these operations, lending a book and lending money, are both called a *loan*, they are of an essentially distinct nature. When a man lends a book, or any other chattel, to his friend, he never parts or dispossesses himself of the property in it. He is entitled to have that very book, or the very chattel, back again. There is no exchange, and no new property created. And only one party can have the use of the book, or the chattel.

But in all cases whatever of a *loan* of money, the lender absolutely cedes the property in the money to the borrower, and it becomes his absolute property. What the lender does acquire is the Right, or Property, to demand back an equivalent amount of money, but not the specific money. A loan of money, is therefore, always an exchange, and in all such cases, there must, by necessity, be a new property created; and this property may be sold and transferred like the money itself.

In the loan of a book, a horse, or other chattel, the right or property, of the lender in it, is never severed from it; in a loan of money, the right, or property, of the lender in it is always severed from it, or rather, transferred to the borrower; and the new right, or property, created in the lender is termed a Debt, or Credit, and when the debt is paid, or, in common language, the loan returned, this new property is destroyed.

Hence we see that there are two distinct species of loan: the one where the lender has the right to have the very thing returned, the other where he has only the right to demand to have an equivalent amount returned. Now all commercial loans are

of the latter species: they are all sales, or exchanges, and they are never of the former sort; and all the confusion on the subject has arisen from not observing this distinction.

The same ambiguity also affects the word *Borrow*.

The confusion, then, has arisen from the English language having but one word, LOAN, to denote two operations of a perfectly distinct nature. The French language is equally faulty. But the distinction is clearly pointed out in Roman Law, and in Latin, there is a distinct word for each operation. Thus it is said in Roman Law[1]—"An obligation may be founded on a thing, as by the delivery of a Loan, or *mutuum*. But the delivery of a Loan, or *mutuum*, consists in the delivery of those things which have weight, number, or measure; as wine, oil, corn, ready money, whether of bronze, silver, or gold; which things, whether numbered, measured or weighed, we give in such a way, that they become the *Property* of the receivers. And since the identical things lent are not, but others of the same nature and quality are, returned to us, it is for that reason called a *mutuum;* because it is so given by me to you, that from being my property it becomes yours (*ex meo tuum fiat.*)"

So also[2]—"But it is called giving a *mutuum*, because from being my property it becomes yours; and therefore if it does not become your property, no obligation is created."

But when such a thing as a book, or a horse was lent, it was not called *mutuum*, but *commodatum*. "He also[3] to whom the use of anything is granted, or *commodated*, is bound by the delivery of the thing, and is subject to the *actio commodati*. But his case greatly differs from that of the person who has received a *mutuum;* because the thing is not given to him so as to become his *Property:* and therefore he is bound to restore the very thing itself."

So also[4]—"We retain the property and the possession of the thing lent (*rei commodatæ*). No one, by lending (*commodando*) a thing, gives the property in it to him he lends it to."

It will thus be seen that the ambiguity in the word Loan, which has perplexed so many Economical writers would never

[1] *Institutes of Justinian*, iii., 15. *See also Gaius' Inst.* iii., 90.
[2] *Digest*, xii., 1 : 2, 2. *See also Digest*, xliv., 7 : 2.
[3] *Institutes of Justinian*, iii., 15 : 2. [4] *Digest*, xiii, 6 : 8, 9.

have caused any difficulty to any one who had studied Roman Law. All commercial loans are *mutua* not *commodata*. Every loan of money is in reality a sale, or an exchange, in which a NEW PROPERTY is created, which is CREDIT; and when the money is returned, or the loan repaid, it is another exchange, by which this new property is extinguished.

On some Erroneous Ideas as to the Nature of CREDIT.

4. The Theory of Credit has not only "puzzled and distressed" Courts of Law, but a great number of Economical writers as well, and among them many very able men of business; and it will be of advantage at this stage of our inquiry, to clear away several erroneous notions which are more or less prevalent.

We will commence by a very specious error put forth by Mr. Henry Thornton, an able man, a banker, and one of the authors of the Bullion Report. We have thought it more convenient to give the full extract in the subsequent section on the Mechanism of Banking, but we will cite one sentence here. He says[1]—"Paper constitutes, it is true, an article on the credit side of the books of some men, but it forms an exactly equal item on the debit side of the books of others. It constitutes, on the whole, neither a debit nor a credit."

So another eminent banker, M. Henri Cernuschi, says[2]—"The balance sheet of every individual contains three accounts: existing goods, Credits and Debts. But if we collected into one all the balance sheets of every one in the world, the debts and the credits mutually neutralize each other, and there remains but a single account; existing goods.

"The totality of goods, therefore, form the general inventory. There is the first matter of exchange. The debts and credits are subsidiary matters. Debts and credits are reciprocally transmitted, as goods are transmitted; but however great or small they may be, and through whatever hands they pass, credits for

[1] *An Enquiry into the Nature and Effects of the Paper Credit of Great Britain.* p. 20. This work is now very scarce. In a copy we bought there is a M.S. note, "Many copies of this work were destroyed by the author, who endeavoured to suppress it."—*Thorpe.*

[2] *Mécanique de l'échange*, p. 1.

some, debts for others, they add nothing to, they take away nothing from the general inventory.

"The increase or the diminution of this general inventory can never take place except from the increase or diminution of the quantity of actually existing goods."

The argument of Thornton and M. Cernuschi is simply this—

Suppose A to have £100 in money, and a three months' bill of £50 on B as well. Suppose B also to have £100, having accepted the Bill for £50 at three months as well.

Then A's property would be stated thus, £100 + £50.

B's property would be stated thus, £100 — £50.

Now the argument of these writers is that the + £50 and the — £50 balance each other, the result is 0, which according to them is the same thing as saying that these quantities do not exist at all.

This view may perhaps at first sight seem plausible, but a very little reflection will shew that it is erroneous.

Suppose a landlord lets a farm to a tenant who agrees to pay him a yearly rent. The tenant is under the obligation to pay his rent year by year, which is just as if he had accepted a series of bills payable every 12 months. Now the right to receive these rents is an actually existing right in the landlord, it is his property, which he may sell or transfer to any one else. It is *plus* to him, and an addition to his other property. The tenant is bound to pay this rent. He is, therefore, exactly in the same position as the merchant who has accepted a bill, and therefore this rent is *minus* to him just as the bill is to the merchant. It is quite clear that if the property of a merchant who has accepted a bill for £50 is stated, thus,—

£100—£50.

the property of a farmer who is bound to pay rent must be stated thus,—

Property—Rent.

But no one would ever say that because a farmer has agreed to pay rent a year hence, that that is any diminution of his balance at his bankers, or to be *subtracted* from the present amount of his property. It is quite clear that the future rents stipulated to be paid are meant to be paid out of *future profits* which are yet to be produced.

It is just the same with a merchant who has accepted a bill

payable three months hence. He is not in debt at the present time, any more than the farmer. The well-known maxim of law is, that *credit unexpired may be pleaded under the general issue*, which means that if a man sues another for an obligation not yet due, he may reply simply that he is not in debt at all! It is quite clear, therefore, that in this case, the — cannot by any possibility mean *subtraction*.

This then is the paradox. The right to receive the future rent is an *addition* to the other existing property of the landlord. In this case + means addition.

But though the tenant is bound to pay the rent, and it is therefore — to him, it is not to be *substracted* from his present property, and it is no diminution of it. And in this case the sign — cannot mean *subtraction*.

What then does it mean?

Mathematicians have since the time of Maclaurin given Debts as an example of "Negative Quantities," but neither they, nor any one else, have given a satisfactory explanation of what is meant by this order of Negative Quantities.

The explanation usually given is this—a man's property may be considered as positive and his debts as negative; subtract his debts from his property, and the remainder, if any, is his Capital. And as the national Capital is the aggregate Capital of all the individuals in it, according to this doctrine, in order to find the quantity of property in the country, all the floating debts in it would have to be subtracted from all the property in it, and the remainder would be the amount of national capital.

So Peacock says[1]—"If property, possessed or due, could be denoted by a number or symbol with a *positive* sign, a *debt* would be indicated by a number or symbol with a negative sign, or *conversely;* such affections of property are correctly symbolized by the signs + and —, since they possess the *inverse* relation to each other, which these signs require: for if to a person A there be given a certain property or sum of money, combined with or *added* to a debt of equal amount, his wealth or property remains the same as before."

Now in a certain sense these modes of statement may be correct. If a man were going to retire from business, he would call

[1] *Algebra*, 1*st Edit.*, *p.* 77.

in and discharge his liabilities, and the remainder, if any, would be his fortune.

But such a mode of statement is quite unsuitable for Economic Science. Debts are a species of property, of the most colossal magnitude, and are the subject of commerce, as much as any other merchandize, until they are extinguished. Economic Science has only to do with them while they exist, and are the subject of commerce. When they are paid they cease to exist.

We will give a very simple example to shew how very erroneous the method of stating the question by Thornton and Cernuschi is. Suppose a banker holds a merchant's acceptance not yet due. Suppose at the same time the merchant holds an equal amount of the banker's notes. According to the method of statement of these writers, the mutual debts cancel each other, and the result is *nothing*. But this is manifestly erroneous: because the banker may, if he please, put the merchant's acceptance into circulation; and the merchant may, if he please, put the banker's notes into circulation. Hence there would be two Economic Quantities in circulation, each producing the same effects as so much money. Hence in Economics these quantities are not to be considered as extinguished until they actually are so in reality. But the same may be said of any other Economic Quantity; when it is destroyed, it is no longer an Economic Quantity. The same principle is true with regard to Credit, or Debt, as with any other Quantity, so long as it exists, and is capable of being exchanged, it is an Economic Quantity. When it is extinguished, and only then, it ceases to be one.

5. Moreover, such a mode of stating the question in Economics violates five distinct branches of human knowledge.—

1st. It violates the Philosophy of Science; because it is a fundamental principle in the Philosophy of Science that when the fundamental conception of a science is once obtained, all the questions in the science must be stated so as to be in harmony with that conception. To state the question as Thornton, Cernuschi, and the Algebraists do, is to make it one of addition and subtraction. Now, in no point of view whatever is Economics a science of addition and subtraction. Therefore no question in Economics must be stated in the form of an addition and sub-

traction. Economics is the science of Exchanges; and therefore all Economic questions must be stated in the form of an Exchange.

2ndly. It is contrary to the whole analogy of Mathematical and Physical Science. In all Mathematical and Physical Science there are Positive Quantities and Negative Quantities. But the Negative Quantities are not subtractions from Positive Quantities. They are always separate and independent quantities, but possessing some quality, or affection, of an *opposite* kind to the Positive Quantities, and the whole science comprehends the *sum* of the Positive Quantities *and* the Negative Quantities. Hence, by the analogy of all Mathematics and Physics, the science of Economics must comprehend the sum of Positive Economic Quantities and Negative Economic Quantities. Hence if money be a positive quantity and Credit a negative quantity, the real question is to discover what quality Credit possesses *inverse*, or *opposite*, to money; so that if Money be called a Positive Quantity in Economics, Credit may, by the analogy of Mathematical and Physical Science, be called a Negative Quantity.

3rdly. It violates Law: because it is one of the most elementary principles of Law, that a Debt or Credit, is a species of valuable property in itself, and not a subtraction from other property.

4thly. It violates Commerce: because every merchant knows that a debt is an article of commerce; and that the commerce in debts is the most gigantic species of commerce.

5thly. It is against the doctrine of all Economists: for all Economists, without any exception, recognizes Debts under the form of Paper Currency, as Bank Notes, Bills of Exchange and as independent valuable property, cumulative to specie, and performing the functions of specie. And even the Physiocrates saw that the nation was so much *richer* by employing Credit instead of Money, by the amount of the Money.

Lastly. Mr. Mill, whose inconsistencies on the subject of Credit are shewn further on, says[1]—"Credit is but a *transfer* of capital from hand to hand;" so also Count Cieszkowski says[2]—"Credit is the metamorphosis of fixed and engaged into capital circulating or disengaged." This definition was at one time

[1] *Book* iii., *ch.* 2, § 2. [2] *Du Credit et de la Circulation*, *p.* 6.

assented to by an able French Economist M. Joseph Garnier, though we are not sure he would adhere to it now. M. Cieszkowski classes Bank Notes, Bills of Exchange, Dock Warrants, &c., indiscriminately as Credit; an error of a fundamental nature which has led to great national misfortunes.

This is a specimen of the admired confusion that reigns throughout all Economics. Here are no less than *four* distinct conceptions of the nature of Credit! Some of these are used quite indiscriminately by writers, without the slightest apparent notion of their inconsistency. We have now, therefore, to determine what is the true conception of Credit among these conflicting notions.

We have now to investigate the meaning of a NEGATIVE ECONOMIC QUANTITY.

On the Application of the THEORY *of* ALGEBRAICAL SIGNS, *and of the* SEPARATION *of the* SIGNS *of* POSITION *and* OPERATION to ECONOMICS.

6. The perplexities of the Theory of Credit which have baffled all the Economists in the world to explain, can only be unraveled by the great modern Algebraical doctrine of the *Separation of the Signs of Position and Operation.*

As the introduction of this great doctrine into Economics is perfectly novel, we shall have to treat of it very fully.

It is a remarkable example of the almost universal truth, that practice has always preceded theory, that even the practice of Science long preceded the theory of science. Thus, from the days of Diophantus, it was perfectly well known, as an empirical rule, that in Algebra $- \times -$ gives $+$. But though Diophantus gives the rule, he can give no reason for it. When the great pioneers of Algebra in modern times, Harriott, Fermat, Vieta, Des Cartes, Cardan, translated their reasonings into general symbols, they found they had created a machine whose working they were unable fully to comprehend. They found, among other things, that many problems produced *negative* answers. Unable, at first, to comprehend them, they believed that they had no real sense, and they called positive roots true, *veræ radices*, and negative roots fictitious, *fictæ radices*. In the pro-

gress of Natural Philosophy the negative sign was used to a vast number of quantities, but no general Theory of Signs was devised, and the progress of mathematics was much impeded by the want of this generalization. The rule that — × — gives + was universally adopted in practice, because no other would lead to right results. But Algebraists were unable to explain the reason of it: it was wholly unknown to Newton; and when the great Euler tried to explain it, he babbled like a child.

Even so late as 1794 a distinguished mathematician at Cambridge denied the existence, and ridiculed the notion, of there being any such things as Negative Quantities.

But since the beginning of the present century a new spirit of philosophy has been breathed into the old science, and a number of distinguished men, Argand, Buée, Warren, Peacock, De Morgan, have completely established the Theory of Signs; and their labours have resulted in the doctrine of the *Separation of the Signs of Position and Operation.*

7. Writers who are not versed in Natural Philosophy, have no conception of the signs + and — meaning anything but *addition* and *substraction,* whereas every one who knows anything of the subject, knows perfectly well that the symbols +, 0, and —, have an immense variety of meanings in Natural Philosophy, according to the particular circumstances under which they occur, and it is wholly impossible to determine their meaning, until we know the particular state of circumstances, out of which they arise.

We have shown that every great science is founded upon some single idea, or conception, or quality, which must be of the most general nature, and that every quantity whatever, in which that quality is found, is an element in that science, no matter what other qualities are found in it.

Now, as Economics is the science of exchanges, or of values, it necessarily follows that every quantity whatever, which is capable of being exchanged or valued, must be an Economic Quantity, no matter what its nature be, enduring or evanescent, corporeal or incorporeal.

But these elements in the various sciences may be endowed with *opposite* qualities, and when they are so, it is universally

the custom in Natural Philosophy to distinguish them by the signs + and —.

They are then called signs of position, or of affection.

The instances of this that might be quoted from the various branches of Natural Philosophy are innumerable, and we will only quote a few to illustrate our meaning, and to furnish analogies to guide us to the solution of the perplexities of Political Economy.

Thus in Algebraical Geometry, in which it is necessary to fix the position of lines, it is usual to take some fixed point called the origin, and then lines drawn in *opposite* directions from that if the lines drawn from the *right* of this point are distinguished by the sign +, those drawn to the *left* are denoted by the sign —. If those drawn *up* from it are +, those drawn *down* from it are —.

So if a line revolving in one direction be +, when it revolves in the other it is —.

So if two mechanical forces act in opposite directions, they are distinguished by opposite signs.

So if an accelerating force be denoted by +, a retarding force will be denoted by —. And a retarding force may be called a negative accelerating force, and an accelerating force may be called a negative retarding force.

The engines of a steamer going a-head may be denoted by +, when going astern by —.

So if 1 be multiplied by powers of a, they are called Positive powers of a: if 1 be divided by powers of a, they are called Negative powers of a; but both Positive and Negative powers of a are Algebraical Quantities.

A curious instance of this may be cited from steam navigation. Owing to the resistance of the water, the paddles and the screw of a steamer do not, in general, propel the vessel through the water so fast as they would do if there were no resistance. This loss of speed is called the slip. But in the case of the screw, by giving the stern of the vessel a particular shape, the paradoxical result may be produced, that she may actually be made to go faster through the water than she ought to do, if the screw were working in a solid. Thus, in this case, the difference between the theoretical and the actual speed is a *gain* instead of a *loss*, and this is called the *negative slip*.

So also in Parliament the supporters of Government may be called +, and its opponents —.

8. Now in many of these cases it may happen that the elements endowed with opposite qualities may balance each other, and the result be 0; but it would manifestly be an error of the greatest magnitude to say that because these elements may, under some circumstances, neutralize each other's effects, that is exactly the same thing as saying they don't exist at all.

Suppose that on a division, the numbers for Government were 340, and the numbers against, 300. Now it is clear that on this occasion the strength of the Government is practically 40, because the — 300 neutralize the effect of the + 300. But it would clearly be an enormous error to say that is absolutely the same thing as if these 600 men did not exist at all. It is perfectly clear that there are 640 Parliamentary units. It is quite clear that to find the total number of Parliamentary units we must *add* the opposition to the ministerialists, and not *subtract* them.

9. Now this idea of opposition is applied to a continuous line, or to motion in a continuous line. If any point be taken as 0, then the part of the line on one side may be denoted by +, and the part on the other side by —.

Thus in a thermometer some fixed point is taken as 0, and degrees above that are called +, and those below —.

Now if the mercury passes from a certain number of degrees on either side of 0, to any number of degrees on the other, it is quite clear that in order to find the total number of degrees passed over, the degrees on both sides must be *added* together.

10. The same idea is applied to TIME in Natural Philosophy, which might be considered as motion in a continuous line. If any point be taken, such as the present moment, or any fixed era, then this point is denoted by 0, and time on opposite sides of this point will be denoted by opposite signs. Thus, if we call time, whether years, weeks, or days, *before* this era +, then time *after* this point will be—, and expressed thus,—

...+7,+6,+5,+4,+3,+2,+1, 0,—1,—2,—3,—4,—5,—6,—7,...

where the sign + merely means that the years it is affixed to

were *before* a given era; and the sign — means that the years it is affixed to were *after* a given era.

It is quite clear that if we want to find the number of years between any event which happened some time *before* this epoch, and another which happened *after* it, or must *add* the number of years on *both* sides of 0.

Thus, if the Birth of Christ be the given era, the years before that era will be *positive*, and the years after it *negative*. To find the number of years from the foundation of Rome to the present time, we should have to *add together* + 753 years and — 1872 years, or 2625 years altogether.

11. These illustrations, which might be immensely extended by examples taken from every branch of Natural Philosophy, are sufficient to exemplify the doctrine that we have endeavoured to explain, that, universally, in Natural Philosophy the *negative* sign — does not mean *negation*, or non-existence, but OPPOSITION, and that *negative* quantities have as real and independent an existence as positive ones, and are to be enumerated separately and independently, as quantities in that science, to find the totality of quantities.

12. But, moreover, inverse or opposite operations may be performed on these quantities which are already affected by opposite signs. And these inverse operations are also denoted by the same signs + and —. And the combination of these opposite signs of inverse operations with the signs of opposite qualities affecting these quantities, that is, the combination of the signs of position and operation, give rise to the well-known Algebraical rules,

$$\begin{aligned} + \times + &\text{ gives } + \\ + \times - &\quad ,, \quad - \\ - \times - &\quad ,, \quad + \\ - \times + &\quad ,, \quad - \end{aligned}$$

These laws, which are universally applicable in Natural Philosophy, are equally applicable to Economics, and among other things, are alone capable of giving the solution of the Theory of Credit, which has hitherto been the opprobium of the science.

It will be found that there are Economic Quantities of inverse, or opposite, properties, and therefore following the strictest

analogy with physical science, we shall denote them by *opposite* signs; and also opposite operations may be performed on these opposite quantities, bringing into play the well-known Algebraical Rules, which will lead to consequences that may surprise some of our readers.

13. As an example that will furnish us with an important analogy, we will give this one. As any opposite, or inverse operations whatever may be denoted by the signs + and —, to *add to*, and *take away* from, are manifestly inverse, and may be denoted by these signs. Now suppose that in the House of Commons, the Government has 358 supporters, and 300 opponents, then the Government strength may be denoted by 358—300. Now for practical purposes the strength of the Government may be called 58, and in so far as regards that, the + 300 and the — 300 neutralize each others' effects. But it would be a most grievous error to say that for *all* purposes it is just the same thing as if these 600 numbers did not exist at all. It is clear that to find the total number of members we must *add* the opposition to the ministerialists, and not *subtract* them. Moreover, if we add (+) to the ministerialists (+), we increase (+) the government strength. If we take away from (—) it, we diminish (—) it. On the other hand, if we add (+) to the opposition (—) that diminishes (—) the strength of the Government: but if we take away from (—) the opposition (—) that *increases* (+) the strength of the Government.

Hence the taking away of opponents (— × —) gives an increase (+) of strength.

Hence Algebra in general, and Commercial Algebra, with which we are at present concerned, deals with QUANTITIES and OPERATIONS. And whenever any of these Quantities, whatever their nature be, possess any *qualities* whatever, or are affected by any *relations* whatever of an opposite nature, they are distinguished by the signs + and —.

And if any operations, whatever their nature be, can be performed on these quantities, if they are of opposite natures, they are also denoted by the same signs + and —.

Thus time past and time future: and, therefore, products which *have been* produced in time past, and products which *are to be* produced in time future: and consequently the Rights to these

products respectively; Active and Passive: Rights and Duties: may all be distingushed by the signs + and —.

So among operations, Adding and Subtracting: Creating and Destroying: Receiving and Paying: may be denoted by the same signs + and —.

Hence the *Right to demand* £100 may be denoted by + £100, and the *Duty to pay* £100 may be denoted by — £100.

14. We shall now show the application of these principles to Economics.

We have defined Property to be a right residing in the person. Now it is quite evident that a person may have in himself a right to an actually existing thing, the produce of the past, and he may also have the right to receive things which do not actually exist at present, but will only come into existence at some *future* time. But each of these is Property, or Wealth, and consequently the totality of a man's wealth is the *sum* of the two. Now following the ordinary custom of Natural Philosophy, if we denote the accumulated products of the past which already exist by the sign +, we may denote the products which will only come into existence at some future time by the sign —.

Now, if we have some quantity like Land, which produces a continuous series of profits, we may denote all the series of profits *before* any given time as Positive, and all the series of profits *after* this given time as *Negative.*

If we make the Present Time the given era, then all the Profits which the Land has produced in *past* time are Positive; and all the Profits which the Land *will* produce *in future*, are *Negative.*

But although these profits will only come into existence at a future time, yet the Property, or Right, to receive them when they do come into existence is Present. Hence the total amount of the Property in the Land comprehends the right to the products of the *past*, together with the Right to the products of the *future:* and as the Property in the products of the past is Inverse, or Opposite, to the Property in the products of the future, if we call the former Positive, the latter will be Negative, strictly in accordance with the principles of Natural Philosophy.

Now the Property in the actually realized products of the

past is Corporeal Property, and the Property in the products which will only come into existence, or possession, at a future time is Incorporeal Property. Hence if Corporeal Property be called Positive, Incorporeal Property will be Negative.

15. In a former chapter[1] we have shewn that there are several other kinds of Incorporeal Property, being the Right to receive the profits arising from different sources, such as Copyright, Patents, the Goodwill of a business, the Practice of a profession, Shares in Commercial Companies, Tithes, Tolls, Ferries, Groundrents, the Funds, and Annuities of all sorts, and we need not repeat the account of them here.

16. Now a merchant, or a trader, of any sort, carrying on a profitable business, bears in many respects a strong analogy to the Land, as we have already said.[2] He may have accumulated money, the proceeds of his past industry: but over and above that, he has his skill and experience, his capacity, in short, and expectation of earning profits in the future.

So a great author may have earned a considerable amount by his past industry; but over and above that, he has his talents and industry, and his capacity of earning profits in the future.

So every one whatever earning an income, in any way, either as a Lawyer, Physician, Architect, Engineer, &c., has over and above what he may already earned and accumulated, the capacity and the expectation of earning future profits.

Now we have already seen[3] that Smith enumerates the "acquired and useful abilities of all the inhabitants" as Wealth and Capital. Say also, and Senior,[4] entirely adopt this doctrine. Mr. Mill also says[5]—"The human being himself, I do not class as wealth. He is the purpose for which wealth exists. But his *acquired capacities* which exist only as means, and have been called into existence by labour, fall rightly as it seems to me, within that designation."

Now it is perfectly clear that this reputation, skill, or capacity

[1] *Ch.* iv., § 18, *On the Classification of Property.*
[2] *Ante, p.* 182. [3] *Ante, p.* 132.
[4] *Ante, p.* 140, 141. [5] *Book* i., *ch.* 3, § 3. *Note.*

for earning future profits, is *inverse* and *opposite* to the accumulated proceeds of his past industry, and most manifestly it is Property. Hence if a man's Property in the proceeds of his past industry be called Positive, his Property in the future proceeds of his industry may be called NEGATIVE.

Now in common language a man's reputation in commerce, or the belief in his power of earning future profits is called his CREDIT. It is power of purchasing; and it is manifest that this power of purchasing is over and above, and additional to, his power of purchasing by means of money.

Hence Money and Credit are Quantities of a similar Nature, but INVERSE, or OPPOSITE, to each other; and if Money be called Positive, Credit will be Negative: and the totality of a man's purchasing power is his Money AND his Credit.

Therefore as the total Property in Land comprehends the Property in the proceeds of the past and also the Property in the proceeds of the future; so the total Property of a man consists in the proceeds of his past industry, *and also* his capacity, or expectation of earning proceeds in the future.

Hence we have shewn beyond the possibility of dispute, that Credit is Property over and above, and additional to, all other Property.

So Demosthenes says[1]—"*δυοῖν ἀγαθοῖν ὄντοιν πλούτου τε καὶ τοῦ πρὸς ἅπαντας πιστεύεσθαι, μεῖζόν ἐστι τὸ τῆς πίστεως ὑπάρχον ἡμῖν.*"

There being two kinds of Property, Money and general Credit, our greatest Property is Credit.

So also[2]—"*εἰ δὲ τοῦτο ἀγνοεῖς, ὅτι Πίστις ἀφορμὴ τῶν πασῶν ἐστὶ μεγίστη πρὸς χρηματισμὸν, πᾶν ἂν ἀγνοήσειας.*"

If you were ignorant of this, that Credit is the greatest Capital of all towards the acquisition of Wealth, you would be utterly ignorant.

So Melon very justly says[3]—"To the calculation of men there must be added what they are worth from their labour.

"To the calculation of values in money, there must be *added* the current Credit of the merchant, and his possible Credit.

And Dutot says[4]—"Since there has been regular commerce

[1] *Against Leptines, p.* 464, 20, *Edit. Reiske.* [2] *For Phormio, p.* 958.
[3] *Essai Politique sur le Commerce, ch.* xxiv., *De l'Arithmetique Politique.*
[4] *Reflexions sur le Commerce et les Finances, ch.* i., *Art.* 10.

among men, those who had need of money have made bills, or promises to pay in money. These bills, or these Credits, have held the place of money. The first use of Credit is therefore to represent money by paper. This usage is very old: the first want of it undoubtedly gave rise to it. It *multiplies* specie considerably: it supplies it when it is wanting, and which would never be sufficient without this Credit; because there is not sufficient gold and silver to circulate all the products of nature and art. So there is in commerce a much larger amount in bills, than there is specie in the possession of the merchants.

"A well managed Credit amounts to tenfold the funds of a merchant; and he gains as much by this Credit, as if he had ten times as much money. This maxim is generally received among all the merchants.

"Credit is therefore the greatest wealth to every man who carries on commerce."

So Smith says [1]—"Trade can be extended as stock increases, and the CREDIT of a frugal and thriving man increases much faster than his stock. His trade is extended in proportion to the amount of *both*, and the sum or amount of his profits is in proportion to the extent of his trade, and his annual accumulation in proportion to the amount of his profits."

So Mr. Mill says [2]—"For Credit, though it is not productive power, is purchasing power."—"The Credit which we are now called upon to consider, as a distinct purchasing power, independent of money."

And also [3]—"The amount of purchasing power which a person can exercise is composed of all the money in his possession or due to him, AND of all his Credit." And we might cite many more passages of a similar import; only it will be better to defer them till we examine Mr. Mill's views on Credit.

We should not have said so much on a matter which must be evident to any one who takes the trouble to consider it, but we shall find that Credit is one of the chief subjects of controversy in Economics at the present day, and we shall have to set forth the extraordinary self contradictions of some writers.

[1] *Book* i., *ch.* 10. [2] *Book* iii., *ch.* 2, § 3.
[3] *Book* iii., *ch.* 12, § 2.

17. We may therefore exhibit the totality of Transferable Property in the following form—

Property consists of

PROPERTY IN THE PRODUCE OF THE PAST. CORPOREAL PROPERTY.	PRESENT TIME.	PROPERTY IN THE PRODUCE OF THE FUTURE. INCORPOREAL PROPERTY.
+	0	—
Lands, Houses, &c.		.....Annual Income for ever.
Premises, Stock of Goods a Shop, &c.	...	.....The Goodwill.
The Printed Copies of a Book...		.....The Copyright.
Machines already made		.....The Patent.
The Money earned by a Professional Man.....	...	.....The Practice.
The Capital of a Commercial Company	...	.....The Shares.
The Money already earned by a Merchant	...	.....His Credit.
	...	Annuities of all sorts, the Funds, Tolls, Ferries, Ground-rents, &c., &c.

Now each kind of Property may be bought and sold, and therefore it is Wealth, as declared 1,300 years ago in Roman Law. And by including both species of Property under the title of Wealth, we double the field of Economics; we give it the same extension that Algebra did to the field of Arithmetic by extending it on both sides of 0 to infinity.

18. To shew the extreme attention necessary to state an Economic problem, we will quote from the works of two very eminent mathematicians.

Euler says[1]:—"The manner in which we generally calculate a person's property is an apt illustration of what has just been said. We denote what a man really possesses by positive numbers, using or understanding the sign +, whereas his debts are represented by negative numbers, or by using the sign —. Thus, when it is said of any one that he has 100 crowns, but owes 50, this means that his real possessions amount to 100 — 50, that is to say 50.

[1] *Algebra, p.* 7. *Edit.* 1797.

"As negative numbers may be considered as debts, because positive numbers represent real possessions, we may say that negative numbers are less than nothing. Thus, when a man has nothing in the world, and even owes 50 crowns, it is certain that he has 50 crowns less than nothing; for if any one were to make him a present of 50 crowns to pay his debts, he would still be only at the point nothing, though really richer than before."

It is quite easy to shew that the first paragraph is not a suitable mode of stating the question in Economics. For suppose that a man has 100 crowns and is bound to pay 50 crowns one year hence. It would be manifestly quite inaccurate to say that his property was only (100 —50) or 50 crowns: for this reason, he has the 100 crowns to trade with in the mean time to make a profit with; and all he is bound to do is to have, on a certain day at the end of the year, 50 crowns to discharge his debt. And the owner of the debt may put it into circulation, and it may produce all the effects of money until it is paid. So that there may be the 100 crowns, *and* the debt of 50 crowns as well, circulating simultaneously in commerce. And yet his property would be correctly stated 100 — 50. Here it is quite clear the 50 crowns are not to be *subtracted* from his present property. Now, by the *Law of Continuity*, the same must be true if we diminish the period of payment gradually from one year by small gradations of a day at a time, till we reduce it to 0, or make his debt payable on demand. The fact is that it means he is bound to exchange some of his property for his obligation at a given time.

So in the second paragraph, when he has nothing to pay and owes 50 crowns, he is said to have less than nothing. This clearly means that he has not only spent the accumulation of his *past* industry, but has also spent the anticipated proceeds of the *future*, and the negative sign clearly means futurity. Now let us suppose that having done so, as Euler says, some one makes him a present of 50 crowns to pay his debt, he is clearly 50 crowns richer than before, and yet his property is now only = 0. This is an example of + × + giving +. Thus Euler is right so far as he goes; but he has manifestly only stated one half of the question. Because there is another combination of Algebraical symbols which gives +, namely — × —; and there is another method in commerce of arriving at the same practical

result. Suppose his creditor *releases* him from his debt, his property would then be = 0, and he would also be 50 crowns better off than before. This clearly shews that the release (—) of a debt (—) is the same thing as an increase (+) of wealth.

19. Hence we see the enormous importance of a very careful attention to the mode of stating the facts in Economics.

A man's property and his obligations being then analogous to opposite quantities, we have manifestly the following laws:—

If we add (+) to his property (+), his obligations (—) remaining the same, that is an increase (+) of property.

If we take away (—) from his property (+), that is a diminution (—) of his property.

If we add (+) to his obligations (—), that is in effect a diminution (—) of his property.

But if we take away (—) from his obligations (—), that is in effect an increase (+) of his property.

Hence we obtain this doctrine in commerce,—A RELEASE FROM A DEBT IS AN AUGMENTATION OF CAPITAL.

We shall see afterwards that this doctrine leads to consequences of the most momentous nature in commerce, which may possibly surprise some of our readers.

The whole subtlety in the case is in distinguishing between one quantity being equal and opposite to another, and therefore neutralising its effects, and taking it way altogether. The opposition in Parliament do not take away, or subtract, an equal number of ministerialists, they only neutralize their effects. To take away from the opposition does not add to the Government numbers, it only takes away a quantity which neutralized their effects.

20. Another very eminent writer, Peacock, Dean of Ely, after saying that property and debts may be symbolized by + and —, says[1] "if a denoted property possessed, and $-a$ a debt, $\sqrt{-1}$. a might denote property neither possessed nor owed, such as a mere deposit would be."

Peacock has explained his ideas at greater length at p. 366, *Art.* 447. of the same volume. He says—"There are many cases, however, of quantities which cannot be represented, unless symbolically, by lines, which are susceptible of affections denoted

[1] *Algebra, 1st Edit., p. 77.*

by + and —, which are appropriate to their specific nature: thus, if a represented property possessed, $-a$ may represent the same property owed; under such circumstances, what is the meaning which may be attached to $a\sqrt{-1}$ and $-a\sqrt{-1}$?

If we consider the succession of quantities

$$a,\ a\sqrt{-1},\ a(\sqrt{-1})^2,\ a(\sqrt{-1})^3,$$

or,

$$a,\ a\sqrt{-1},\ -a,\ a\sqrt{-1},$$

and if the first represents property possessed, and the third property owed, the second can neither represent property possessed nor owed, under the same circumstances or by the same person, inasmuch as in such a case, it would be symbolically represented by a or $-a$: it may represent, however, property deposited, which admits of similar relations when considered as property possessed and property owed by another person; under such circumstances, the *affectation* of a denoting property possessed by A by the sign $\sqrt{-1}$ would convert it into property possessed by B: and the *affectation* of $a\sqrt{-1}$ by $\sqrt{-1}$, would convert property possessed by B into property owed by A: thirdly, the *affectation* of $-a$ by $\sqrt{-1}$ would convert property owed by A into property owed by B: and fourthly, the *affectation* of $-a\sqrt{-1}$ by $\sqrt{-1}$ would convert property owed by B into property possessed by A: the repetition of the process of *affectation* by the sign $\sqrt{-1}$, would reproduce continually the same succession of transfers of property from A to B, and of conversions of property possessed into debt, and of debt into property possessed, which is required to correspond to the succession of the same symbolical results.

"In this case, the interpretation of the sign $\sqrt{-1}$ which we have given, satisfies the symbolical conditions, and also coincides with the interpretation of the meaning of the signs + and —, which is otherwise established: we cannot give it the additional authority of the coincidence of this interpretation with the interpretation of the meanings of the quantities corresponding to a^2 and $-a^2$, for those quantities in the case under consideration admit of no interpretation."

21. With all deference to so great a writer, we think this view is not correct. In fact there is no such thing as *property owed.* As Credit is a *personal* Right residing in the Creditor,

so Debt is a *personal* Duty residing in the Debtor. The Credit itself is an article of property, which must have arisen out of some previous exchange, and what is really meant by saying that a man is in debt is, that he must exchange some of his property to buy this Debt or Credit. Now the symbol $\sqrt{-1}$ denotes that operation which being twice repeated, changes + into —.

Hence, if this symbol is applicable to Economics at all, it must denote the operation which, being twice repeated, changes property into a debt. But depositing a thing twice with a man does not change property into a debt. Nor does it transfer the property. These are single operations of the will, and, therefore, it appears to us that Economics is a science to which the symbol $\sqrt{-1}$ is not applicable.

After venturing the criticism contained in the preceding paragraph on the views of Peacock, we have had the great satisfaction of finding that De Morgan has expressed similar sentiments in the article *Algebra* in the English Cyclopædia. He says—"It is impossible that a perfect Algebra can be founded on ideas of time, loss and gain, or any in which only two directions can be imagined. Space, from the affinity of directions which it admits, is as yet the only perfect medium of explanation. Time before and time after a certain epoch may be represented by the positive and negative quantity; but what is there in the idea of time to which the sign $\sqrt{-1}$ can possibly apply? Again, shew us a commercial operation which performed upon a gain, produces a sort of result which can neither be called gain or loss, but which repeated *two* or more times upon a gain turns it into a loss—and we can immediately see a system of Commercial Algebra in which $\sqrt{-1}$ shall be intelligible."

22. As this point is, in fact, the greatest subtlety in Economics, and involves consequences of the most momentous nature, which we dare say our readers little dream of at present, but which are fully explained afterwards, we shall extract what Peacock has said in the 2nd edition of his *Algebra*, p. 15. :—

"We conclude our observations upon this subject with the discussion of one more example of a problem of very extensive application.

"A merchant possesses a pounds and owes b pounds; his substance is therefore $a - b$, where a is greater than b.

"But since a and b may possess every relation of value, we may replace b by $a - c$, or by $a + c$, according as a is greater or less than b; in the first case we get

$$a - b = a - (a - c) = c$$

and in the second

$$a - b = a - (a + c) = -c$$

If c therefore express his substance or property, when *solvent*, $-c$ will express the amount of his debts when *insolvent*: and if from the use of + and — as signs of affection, or quality, in this case, we pass to their use as signs of operation, then inasmuch as

$$a + (-c) = a - c \text{ and } a - (-c) = a + c$$

it will follow, that the addition of a debt $(-c)$ is equivalent to the *subtraction* of property c of an equal amount, and the *subtraction* of a debt $(-c)$ is equivalent to the *addition* of property c of an equal amount, and it consequently appears that the subtraction of a debt, in the language of symbolical algebra, is not its *obliteration* or *removal*, but the change of its affection or character, from money or property owed, to money or property possessed."

23. We hope we shall succeed in shewing that the views expressed in this latter paragaph are not correct.

In the first place we must say that there is no such thing as *property owed.* A debt in commerce is a species of property itself, which was created in exchange for some property. And when a man is in debt it means that he is bound to buy up, or exchange some part of his property for this debt. But there is no particular part of his property which he may be said to owe more than another. His property is absolutely his own, and indeed he may spend it all and leave his debts unpaid.

Now as a debt always arises out of an exchange, and must necessarily do so, an addition of debt also arises out of an additional exchange. It is a new property created in exchange for more property. Hence to *add* and to *subtract* a debt, is in fact to *create* and to *destroy* property. As we shall shew.

A banker receives £100 in money from his customer, and in

exchange for that, he creates £100 of debt, which is the property of his customer. His property is then stated

$$£100 - £100 = 0.$$

Now arguing according to the common mode, that means there is no property at all in existence, a conclusion that is manifestly erroneous.

It is perfectly true that, so far as regards the banker himself, he may be said to be no richer than he was before, but as far as regards Economics—and it is the master subtlety of the subject—the effects are very different. The banker has now £100 in money, which is his own property, which he may trade with, and make a profit by. And his customer has £100 as well, in the banker's notes, with which he can buy anything he wants, as well as with money. Hence there are *two* circulating and exchangeable properties instead of *one*. And though no doubt the banker is always liable to be called on to exchange some of his money for his liabilities, yet the very business of banking is based on the probability that he will *not* be called upon to do so to any very appreciable amount at any one time.

The banker, then, possesses as his own property £100, coupled with the *Duty to pay* £100, if required to do so. The customer has the *Right to demand* £100, in the banker's notes, which pass currently as money. Now suppose that for any reason, the customer chooses to release the banker from his debt. He does this by presenting him with his own notes. The banker, then, has £100 in money, and besides that he has the Duty to pay £100 (—£100) and the *Right to demand* £100 (+£100). Now these two latter quantities cancel each other; and the banker has now the £100 in money, freed from any Duty to pay: and therefore he is practically £100 richer than before; but so far as regards Economics, there has been a destruction of property. By this operation his assets remain exactly as they were before, but his liability has been destroyed.

Hence we see where Peacock's error lies, and it is a very important one, and must be thoroughly explained. Peacock considers a Debt to be money owed, or money affected with the Negative Sign, and the subtraction of a Debt to be the change of the sign of affection of money owed into money possessed. But this is a great error. As Credit is the abstract *Right to demand* residing in the person of the Creditor, so the Debt is the

abstract *Duty to pay* residing in the person of the Debtor. The Credit and the Debt together constitute a CONTRACT, which is thus composed of two opposite quantities, which spring into existence together, which can only exist together, and which vanish together. A contract, therefore, in society exactly corresponds to Polar Forces in nature.

The importance of this view is easily seen, and we will shew how it applies to a case in which Peacock's view wholly fails. Suppose a man is utterly insolvent, has no property whatever, and is in debt £100. Then the Creditor has the *Right to demand* £100, and the Debtor's *Duty to pay* exists quite irrespective of the fact that he has any money or not. If the Debtor cannot pay his Debt, the Creditor's Right may lose its Value; but that does not destroy its existence. So the Debtor's inability to pay does not in any way destroy his *Duty to pay*. Hence the Contract, the Right and the Duty, exists quite independently of any money. Now suppose the Creditor generously presents his Debtor with his *Right to Demand*. Then the Debtor has both the *Right to demand* and the *Duty to pay* in his own person. They cancel each other; and the Debtor is now freed from his Debt. And it is very clear that it is *not* by changing money owed into money possessed, because there has been no money at all in the case, but by annihilating the Duty. And the Debtor is now £100 richer than he was before.

So De Savigny, confessedly one of the greatest modern jurists, in exact accordance with the preceding, says[1]—"Every release of a debt enriches the debtor. The amount of the donation is always equal to that of the debt, even although the debtor is insolvent. Although the release from a debt destined never to be paid seems a thing of no consequence, the augmentation of property does not the less exist. In effect not only does property represent a quantity always indeterminate, but its total value also can be either positive or negative. If then property is reduced to a negative value, the diminution of *minus* is, in Law, a change identical with the increase of *plus* for a positive value."

So also[2]—"The remission of a debt always constitutes a donation in money equal to the amount of the debt, and that although the debtor be insolvent."

[1] *Traité de droit Romain, Liv.* ii., *ch.* 3, § 158. [2] *Ibid.* § 166.

We shall have more to say on this subject in the section on the Extinction of Credit.

24. In popular commercial language, Credit means purchasing power, over and above money. If a merchant is said to be in great Credit, it means that people would be willing to sell him goods, and take his "promise to pay" instead of actual payment. If a person be said to have lost his credit, it means that he has lost the power of purchasing with his promise to pay, and can only buy with ready money. But such a vague, indefinite, meaning of Credit does not come within Economics. Economics has only to do with property in commerce. It has nothing to do with money itself, unless it be in commerce. Consequently Economics has nothing to do with Credit until it is brought into commerce, and a purchase has actually been made by means of it.

Now when a man comes to trade, with his Credit, as we have before observed,[1] considerations of a complex nature arise. If a man buys goods, not with money, but only with a "promise to pay" money at some future time, or with Credit, directly the seller of the goods transfers the property in the goods to the buyer, a CONTRACT, or *nexus*, springs into existence, or is created between the buyer and the seller. At the very instant that the property in goods passes to the buyer, there is CREATED in the person of the seller the RIGHT *to* DEMAND their price in money at the stipulated time: and at the very same instant there is CREATED in the person of the buyer the DUTY *to* PAY their price in money at the stipulated time.

Now these two Quantities created at the very same instant of time are INVERSE and OPPOSITE to each other; and therefore they may be designated by opposite signs. And just in the same way as Peacock says that *receiving* and *paying* are examples of the signs + and —, so if the *Right to Demand* be *Positive*, the *Duty to Pay* is NEGATIVE.

Now it is this actual definite *Right to demand* which in the language of Law, Commerce, and Economics is termed CREDIT, and the person in whom this right resides is termed the CREDITOR.

It is very frequently the custom to write this Property, or Right, on paper, for the purpose of fixing, recording, and transferring it; there are several forms of these paper documents, such as Bank Notes, Bills of Exchange, &c.; they are very com-

[1] *Ante, p.* 183.

monly called Instruments of Credit, as is more fully explained in the next section.

When, therefore, we speak of Credit in Economics, it must be clearly understood we do not speak of the vague popular reputation, but of an actual and definite Right, created against the person of him who enjoys this credit. Thus when a man has a Credit in bank, it means that he has an actual Right to demand a sum of money from the banker; when a man has a Letter of Credit, it means a letter giving him a positive Right to demand a certain sum of money from the person it is addressed to. When we speak of Paper Credit we mean the actual Bank Notes, Bills of Exchange, &c., in circulation, each embodying an actual Right, or Debt, which was created for the purpose of being sold, or exchanged for something else. When we speak of the Public Credit of the country, we mean the Public Debts which have been created by the State.

25. We now at length perceive clearly what is the true interpretation of saying that Money is a Positive Quantity. It means that Money is a Right, but Debt is a Duty. And this exactly corresponds with the common Algebraical doctrine that Quantities passing through 0 change their sign. Because when a man has spent all his money, his property being then 0, and then runs into Debt, he has spent all his Right (+) and incurred a Duty (—).

Now a merchant's purchasing power consists in his money *and* his Credit. But he cannot purchase with his Credit without incurring a Debt; that is, without incurring the Duty to pay for the goods he buys with his Credit. If he buys goods with money, he makes a profit or a loss according as the price he gets for the goods is more or less than the money he paid for them. If he buys with Credit, he makes a profit or a loss, according as the price he sells the goods for, is more or less than the *Duty to pay* which he has incurred. Supposing, however, that his speculation in either case has been profitable, his Money and his Credit have been equally Capital to him, exactly in the same way and in the same sense.

26. It is a matter of considerable interest to discover what are the proportions which credit and money bear to each other in

modern commerce. The difficulties, however, which prevent private inquirers arriving at any reliable information, are very great, and those opportunities which are presented by Parliamentary inquiries into Commercial Crises are very rarely made use of for any but their immediate purpose. In the Report, however, of the Committee of the House of Commons on the Commercial Crisis of 1857, there occurs a very interesting statement made by Mr. Robert Slater, the managing partner of the great house of Morrison, Dillon, and Co. Having analysed the operations of the house for the year 1856, he gave in the following statement, as showing the proportions in which each million of payments and receipts were made in money, bank notes, and other instruments of credit:—

RECEIPTS.

	£	£
In Bankers' Drafts and Mercantile Bills of Exchange, payable after date	533,596	
In Cheques on Bankers, &c., payable on demand	357,715	
In Country Bankers' Notes	9,627	
		900,938
In Bank of England Notes	68,554	
In Gold	28,089	
In Silver and Copper	1,486	
In Post Office Orders	933	
		99,062
		£1,000,000

PAYMENTS.

	£	£
By Bills of Exchange, payable after date ...	302,674	
By Cheques on London Bankers	663,672	
		866,346
By Bank of England Notes	22,743	
By Gold	9,427	
By Silver and Copper	1,484	
		33,654
		£1,000,000

Here we have it shewn, that in this great house, which there is no reason to suppose we may not consider a fair representative

of commerce in general, it appears that in receipts, gold and silver only entered to the extent of 3 per cent., and Bank of England notes to the amount of less than 7 per cent., the remaining 90 per cent. being entirely in credit. Of the payments, gold and silver were only 1 per cent., and bank notes 2 per cent., the remaining 97 per cent. being effected by pure credit. In Scotland specie enters even in a far less degree into payments. This will give some idea of the stupendous power of Credit in this country.

27. And this Right, or this Credit, is property which may be bought, sold, or exchanged, imported or exported, or sent from one country to another, in exactly the same manner as money, corn, cotton, hides, or any other merchandize.

Such Rights are Incorporeal Property—"Incorporeal things are those which cannot be touched; such as those which consist of a Right, as an inheritance, a usufruct, use, or obligations in whatever way contracted. Nor does it matter that corporeal things are contained in an inheritance; for fruits gathered from a farm are corporeal; and that which is due to us from an obligation is generally corporeal such as a farm, a slave, or money; but the right itself of the inheritance; and the rights itself of usufruct; and the Right itself of the Obligation is Incorporeal."[1]

The correlative Duty in the person of the Debtor was called an Obligation.—"An Obligation is the bond of the Law, by which we are absolutely bound to pay something by the terms of the Law."[2]

The word Debt is unfortunately used in common parlance to denote both the *Right to Demand* and the *Duty to Pay*. This double use of the words leads to much confusion of idea on the subject. It would be a great improvement if it could be confined to the Duty to Pay, as it really means that. But this is an improvement in popular language which is scarcely to be hoped for.

Instruments of Credit are called indiscriminately Credit, Debts, or Obligations.

Now the Duty to Pay always remains fixed in the person of the Debtor. But the Creditor may sell or transfer his Property like any other; hence the Right is, by the Definition which we

[1] *Institut. Just.* ii., 2. *See also Gaius*, ii., 14. *Digest* i., 8 : 1. 1.
[2] *Institut. Just.* iii., 13. *Digest* xliv., 7, 3.

have shewn to be universally adopted, WEALTH. And all circulating Debts, or Credit, are just so much Exchangeable Property, or Economic Quantities, as money, corn, manufactures, or any other merchandize, as every Lawyer, Economist, and Merchant knows.

This is simply an example of the great Algebraical doctrine of the *Principle of the Permanence of Equivalent Forms;* for we have said that £ is the General Symbol of an Economic Quantity; and every one knows that in all banking and mercantile accounts, Credits or Debts of all sorts, Bank Notes, Bills of Exchange, &c., are always included under the general symbol £, just in the same manner as money or any other goods.

Hence, as Credit may be used in exactly the same manner as any other Economic Quantity, it may be used as Capital as well as anything else. For we have seen that the true definition of Capital is, *Any Economic Quantity used for the purpose of Profit.* Also we have shewn that Smith, Say, Chevalier, Mill, and indeed all Economists since Smith, admit that *purchase* or *transport* is one species of Production; hence as Credit is almost universally used as purchasing power in modern times, Credit may be Productive Capital, exactly in the same sense, and in the same manner, that Money may be used as Productive Capital.

28. These Rights, or Credit, were expressly included under the title of WEALTH in Roman Law.

Thus says Ulpian[1]:—"Ea enim res est quæ emi et venire potest."

That is Wealth, or Property, which may be bought and sold.

All species of Property, whether Corporeal or Incorporeal, were included under the title of "*Res*," "*Bona*" or "*Pecunia*" in the Digest; or under that of "πράγματα," goods and chattels, or χρήματα, wealth, in the Basilica. Thus, Digest L. 16, 23, Rei appellatione et causæ et jura continentur.

Basil. II., 2, 21—τῇ τοῦ πράγματος προσηγορίᾳ καὶ αἰτίαι καὶ τὰ δίκαια περιέχεται.

Under the name of WEALTH *both causes and* RIGHTS *are included.*

Digest, L., 16, 222.—PECUNIÆ nomine non solum numerata

[1] *Lib.* 43, *ad Edict.*

pecunia, sed omnes res, tam soli quam mobiles, et tam corpora, quam JURA continentur."

Basil. II., 2, 214—τῷ ὀνόματι τῶν χρημάτων οὐ μόνον τὰ χρήματα ἀλλὰ πάντα τὰ κινητὰ καὶ ἀκίνητα, καὶ τὰ σωματικὰ καὶ τὰ ΔΙΚΑΙΑ δηλοῦται.

Under the name of WEALTH, *not only ready money, but all things both immoveable and moveable, and both corporeal and* RIGHTS *are meant.*[1]

Thus also says Sir Patrick Colquhoun[2]—"The first requisite of the consensual contract of *emptio et venditio* is a MERX, or object to be transferred by the seller to the buyer, and the first great requirement is that it should be *in commercio*, that is capable of being freely bought and sold. Supposing such to be the case, it matters not whether it be an immoveable, or a moveable, corporeal or incorporeal, existent, or non-existent, certain or uncertain, the property of the vendor or another; thus a horse, a RIGHT OF ACTION, servitude, or thing to be acquired, or the acquisition whereof depends on chance.

"A purchaser may buy of a farmer the future crop of a certain field. Wine which may grow the next year on a certain vineyard may be bought at so much a pipe; or a certain price may be paid irrespective of quantity or quality, and the price would be due though nothing grew, or for whatever did grow. In the second case the bargain is termed *emptio spei;* and in the first and last *emptio rei speratæ*, which all such bargains are presumed to be in cases of doubt.

"The cession of a *Right of Action* being legal in the Roman Law, the right of A to recover a debt due by B may be sold to C."

Thus we have shewn clearly that credit was expressly included under the title of Wealth and Merchandize in Roman Law, which is the Common Commercial Law of all Continental Europe and Scotland.

We also see that under the title of χρήματα, Wealth, the three species of Economic Quantities, Material things, Immaterial things, and Incorporeal things, are expressly enumerated.

It is exactly the same in every system of Law. Credit is in-

[1] *See also, Digest* l., 16 : 6, 49, 91. *Basil.*, ii., 2 : 6, 19, 46, 88, 138.
[2] *A Summary of the Roman Civil Law*, § 1638.

Unternehmer ist Käufer eines bloß Wahrscheinlichen (mit ökon. Vertretg. [illegible]) —

cluded under the designation of "goods and chattels" in English Law.

It is one of the most elementary principles of Law that a Debt or Credit, is a species of Property. Thus, says Mr. Williams[1]—"*Choses-in-action* (*i. e.*, debts) having now become assignable, become an important kind of personal property. Again[2]—"A legal *Chose-in-Action* constitutes a valuable personal property." Also[3]—"In addition to goods and chattels in possession, which have always been personal property, and to *Debts* which have long been considered so."

So also Mr. Justice Byles says[4]—"This species of property is now in aggregate value inferior only to the land or funded debt of the kingdom." This sentence was written more than forty years ago, and we may safely assert that the mass of Credit at the present time, greatly exceeds the funded debt.

So also Chancellor Kent says[5]—"As they serve the purposes of cash, facilitate commerce, and are the visible representatives of property, they may be truly said to enlarge the Capital Stock of Wealth in circulation, as well as increase the trade of the country."

Every Economical writer, too, has treated Bills and Notes as exchangeable property like any other; we have already shewn that Smith does so.[6]

29. We have now tracked to its lair, and exterminated every false conception of Credit which has puzzled and misled writers. There is only one other thing which may possibly embarrass any one. We have said, what has been repeatedly said before, that Credit is Property of the same nature, but inferior in degree to Money. Some might say in answer to this that Credit is intended to be, and always is, ultimately paid in money; and that the transaction is not finally closed until the Credit is paid in money. The answer to this is very simple, that in modern times not one Bill in a hundred is ever paid in

[1] *Law of Personal Property, p.* 5. [2] *Ibid., p.* 8.
[3] *Ibid., p.* 8. [4] *A Treatise on Bills of Exchange, Preface.*
[5] *Commentaries on American Law, Vol.* iii., *p.* 87. 11*th Edit.*
[6] *Ante, ch.* iv., § 33, *p.* 133.

money, but by means of Credit as is shewn hereafter. Next it has been shown long ago that Money is only an intermediate agent in exchanges. A sale is a demi-exchange. Money itself as has been observed, scores of times by the most eminent Economists, is only an order or power of commanding whatever its owner may require. It is therefore only permanent and general Credit; it is only the highest form of Credit. So that the payment of Credit in money is only the exchange of particular and precarious Credit for permanent and general Credit. Daniel Webster said most justly that "Credit is to money what money is to merchandize." So that if the use of money resolves an exchange into two parts, Credit resolves it into three. First there is the exchange of the goods for the Credit, then the exchange of the Credit for the Money, and then the exchange of the Money for something else, which is the real closing of the transaction.

30. We hope we have now made sufficiently clear the object we had, in a former chapter, in disembarrassing the word Wealth of all notions of Labour and Materiality, and shewing that its essence is purely and simply EXCHANGEABILITY, and that the only true and comprehensive definition of Wealth is an EXCHANGEABLE RIGHT. By far the most gigantic species of property in this country is Credit. For not only is almost all commerce carried on by means of Credit, and therefore the quantity of Credit must be about equal to all other commodities put together, but also the Credit which is created to circulate these commodities is itself the subject of another commerce, in which Credit is created to purchase this Credit, so that there can be no doubt whatever that taking the two species of Credit together, the aggregate of Credit in this country far exceeds all other commodities put together. And there are actually some writers who would seek to exclude Credit and Incorporeal Quantities from Economics altogether! It must be obvious, on the slightest consideration, that it is as absurd to attempt to exclude Incorporeal Quantities from Economics as it would be to exclude Gravity or any other Incorporeal Force from Mechanics. For Credit is in Economics exactly what Gravity is in Mechanics. Gravity is Force, pure and simple; so Credit is Exchangeability pure and simple, divested of any notions of Labour and Materiality. Credit is

the principal subject of Commerce, or Exchange, in modern times; and to exclude from the Science of Exchanges, or Commerce, the species of Property which is the subject of the greatest commerce, is about the most preposterous absurdity that ever entered the human mind.

The preceding considerations dissipate the whole of the Lucretian Philosophy into thin air. For the very foundation and corner-stone of the Atomic Philosophy is that *Nothing can come from Nothing*, and that *Nothing can go back into Nothing*. Now when a contract is created, the Right of which is a saleable commodity, out of what material particles is it composed? The very word invariably used regarding Debts is to "create" and to "annihilate" them. It is wholly untrue that human labour is always employed in re-arranging the particles of matter. Human labour to an enormous extent is employed in producing and acquiring IDEAS, and Science, and Knowledge. It might be perilous to say "creating" ideas, because that might give rise to many metaphysical quarrels. No one surely would say that Ideas and Science and Knowledge are formed out of material particles. But a man may have property in ideas; he may buy and sell them. Hence they are Wealth.

And we also see how completely Roman Law has demolished the other Lucretian dogma—

"Et facere et fungi sine CORPORE nulla potest RES"

because it is a matter of fact that the RES INCORPORALES which "*faciunt*" and "funguntur" "*sine corpore*" are enormously the largest proportion of property in modern times; and these are expressly declared to be Wealth in Roman Law, and in every system of Law.

Nor is this a mere literary logomachy. For it was the silly dogma that *Nothing can come from Nothing*, which obscured and confused the views of Physiocrates. It is repeated over and over again in their writings, and was the foundation of the dogma, that was the basis of their science, that all wealth comes from the earth. But the simple change of the meaning of the word Property from being a material thing into the RIGHT to a thing, has changed the whole face of the science like the transformation scene in a Christmas Pantomime. And this change was within their grasp. For they themselves had

observed that Property is the Right to a thing, and their whole science was based on the Right of private property. When we see, therefore, that Wealth is an Exchangeable Right, we see that Wealth can be "created" and "annihilated" and "function" "without a body," because the greatest amount of Property by means of which the commerce of the world is carried on, and which is bought and sold every day to the amount of millions, is nothing but abstract Rights.

Section II.

On the Transfer *of* Credit, *or* Debts.

Property of two kinds.—Property held in Dominion—Property held in Contract—Bilateral Contracts—Unilateral Contracts—Origin and Progress of the Transfer of Debts in Roman Law—Principles of English Law and Equity relating to the transfer of Debts—Upon Instruments of Credit.

31. If we were asked—Who made the discovery which has most deeply affected the fortunes of the human race? We think, after full consideration, we might safely answer—The man who first discovered that a Debt is a Saleable Commodity.

We have, in the preceding section, shewn that Credit is the name of a species of Incorporeal Property. In the present section, we have to trace the origin and progress of the power of selling, or transferring, Debts, and place this branch of Commercial Law on solid foundations.

Property is of two kinds—

1. Property held in Dominion; where a person has a specific Right to some particular thing, without any relation to any one else. When a person has such a sole and exclusive power over a thing, he may sell or transfer it to any one else in any way he pleases. Money is of this sort of property; and hence a man may freely sell and transfer his own money.

2. Property held in Contract: that is a person has a Right, but in connection or relation to some one else.

But Property held in Contract is of two kinds—

(α). Where each party has Rights to receive and Duties to perform: such as the *Nexus*, or Obligation, between Lord and Vassal in Feudal Law; and that between Master and Servant at the present time. This is termed a Bilateral Contract.

(β). Where there is only a Right to receive on one side, and a Duty to pay, or perform, on the other—such as the relation between Creditor and Debtor; or Landlord and Tenant in modern times. This is called a Unilateral Contract.

Now, formerly it was held universally that wherever Property was held in Contract, of either sort, neither party could sub-

stitute another person for himself, at his own will and pleasure, and without the consent of the other party to the contract.

This rule must manifestly hold good in all bilateral contracts; because as each side has a Duty to perform, of course the person who has that Duty to perform, cannot substitute any one else to perform it, without the consent of the other party.

Thus so long as the Feudal Law remained in its pristine rigour, neither the Lord nor the Vassal could substitute any one else for himself without the consent of the other party—"As the Feudatary could not alien the feud without the consent of the Lord, so neither could the Lord alien, or transfer, his Seignory, or Superiority, to another without the consent of the feudatary. For the obligations of the superior and inferior were mutual and reciprocal; the feudatary was really as much interested in the conduct and ability of the Lord, as the Lord was in the qualifications and ability of his feudatary. And as the Lord could not alien, so neither could he exchange, mortgage, or otherwise dispose of his Seignory, without the consent of his vassal. Again, as the vassal or feudatary, could not alien, so neither could he devise or dispose, of the feud by will, or by any means (when feuds were become hereditary) prevent or vary the feudal course of succession."

The same principle originally held good when the contract was unilateral, as is the case between Creditor and Debtor. But when the obligation is of this form, the party that has the Right to receive, soon begins to insist upon the power of transferring this Right, like any other Property. And there is a very good reason for this. For in the case of the obligation, or contract, of Debt, there is manifestly a strong distinction between the two parties, the Creditor and the Debtor. The Debtor cannot substitute another Debtor for himself, because the Creditor may not have the means of knowing the solvency of the substituted Debtor. Therefore by the very nature of things, the consent of the Creditor is indispensable to the substitution of a new Debtor. But the case of the Creditor is different. If a person really owes a debt, and has the means of paying it, it cannot make the slightest difference to him, whether he pays it to A or to B, provided he can get a discharge for it. Hence it is evident that while the assignment of a new Debtor might

[1] *Wright's Tenures, p.* 30.

seriously prejudice the Creditor; the assignment of a new Creditor can be no real prejudice to the Debtor.

We have now to trace the rise and progress of the power of the Creditor to sell or transfer his Right in Roman and English Law.

32. For many centuries the Romans divided property into two sorts, according to the method by which it might be alienated, sold, or transferred. That species of property which they first possessed, and were most habituated to consider as wealth, could only be transferred, or sold, by certain very strict and minute formalities. This property was called "*Res mancipi.*" Other property which was held in less esteem at first, might be transferred by simple delivery; this property was called "*Res nec mancipi,*" and amongst this species was classed the greater portion of Incorporeal property.[1]

The words *Obligatio* and *Contractus* do not belong to early Roman jurisprudence. The relation between Creditor and Debtor, established by a loan of money was called a *Nexus* in the Code of the XII. Tables. The Mutuum, or Loan of money, could only take place by the solemn form of the weight and scales (*per aes et libram*) used in transferring the *Res mancipi.* The form of *Stipulation* by question and answer, was gone through before five witnesses,[2] and then the Debtor was bound by a very severe contract, bond, or *nexus*, to the Creditor: the discharge from this bond was called *solutio*, an untying.

But the Debt created, or the Right of the Creditor to demand an equal sum in return at a future time, was Incorporeal property, and classed under *Res nec mancipi*,[3] and therefore might be transferred by mere delivery.

Unfortunately the part of the Code of the XII. Tables which related to obligations, is not extant. It is impossible to say, therefore, whether they made any provision for the sale or transfer of debts, or even whether such an idea had occurred to the Romans at that time, that a debt might be sold, or transferred.

Although Credit was classed under the *Res nec mancipi*, or

[1] *Gaius* ii., 17, 19, 20.

[2] For examples of the *Stipulatio*, see Plautus, *Asinaria* ii., 4, 48. *Pseudolus* i., 1, 112: iv., 6, 15. *Curculio* v., 2, 68: 3, 31, 33. *Bacch.* iv., 8, 41. *Trinummus* v., 2, 34, 89. *Rudens* v., 2, 47.

[3] *Gaius* ii., 17.

property which passed by simple delivery, it could not be transferred by manual delivery. The Romans did not till a very late period, adopt the modern practice of recording the evidence of debts in written documents, the delivery of which is equivalent to the delivery or transfer of the Credit itself, so that Credit may be strictly delivered manually, like any other chattel.

The first notice that we have of the sale or transfer, of debts among persons not bankers is in Gaius ii., 38. He says that though debts were classed among the *Res nec mancipi*, as they could not pass by manual delivery, it was necessary for the three parties, the Creditor, the Debtor, and the Assignee to meet together. If then they agreed among themselves that the Creditor might transfer his Right against the Debtor to the Assignee, the parties entered into the solemn verbal agreement, or *Stipulation*, before witnesses, by which the Creditor transferred his Right against the Debtor to the Assignee. When this was done, the Assignor was discharged from his liability to the Assignee, and at the same time he discharged the original debtor from his debt to him. The contract established between the assignee and the original debtor was termed a *Novatio;* and the assignment of the new debtor to the new Creditor was called a *Delegatio.* When this solemn stipulation was completed, the Assignee might sue the debtor in his own name, as there was now a privity of contract between them.

33. The early simplicity of the Code of the XII. Tables knew nothing of Trustees or Attorneys. Every man was either the absolute proprietor of a thing or he was not.[1] He in whom the legal estate was vested was called *Dominus ex jure Quiritium*, or the proprietor by the Common Law of the Romans. It knew nothing of double, or subordinate, rights. The Code of the XII. Tables allowed no man to sue in the name of another, except in two cases.[2] He alone who was *Dominus ex jure Quiritium* might sue, and that in person; and as no man could sue another unless there was some contract, or relation between them, the assignee of a debt could not sue the debtor, because there was no privity of contract between them.

[1] *Gaius* ii., 40.

[2] *Gaius* iv., 82. *Digest* 4, 17: 123. *Basil.* ii., 3, 123.

The Code of the XII. Tables was maintained in all its strictness for about 277 years. During this period the forms of writs of actions were defined with the greatest rigour, the slightest variation being fatal to the action. These were called *Legis actiones*, or as we might say Common Law writs; and as long as these lasted, no one could sue on behalf of or in the name of another.

34. But in the progress of time, new rights, new interests, new wants, and new ideas grew up; and a great Equitable jurisdiction came into existence to meet the new requirements. The supreme judicial Magistrates, the City and Foreign Prætors, were clothed with the power *Adjuvandi vel supplendi, vel corrigendi juris civilis gratia propter utilitatem publicam.* So deep was the reverence of the Romans for their Code, which Cicero declares to contain in one chapter more utility than all the libraries of the philosophers,[1] that the Prætors were not permitted actually to abolish any of its Laws, but only to supply their defects. But new rights and interests had grown up, which were incapable of being directly protected by Law, unless by the actual repeal of some of the provisions of the Civil Code.

Among these new rights were Equitable interests. One person might be possessed if the legal estate in certain things, but permit another to enjoy their use and profit, without undergoing the usual solemnities of the transfer by mancipation, or the *cessio in jure.* The original owner, therefore, possessed the *nudum jus Quiritium*, or the mere legal estate, while the grantee possessed the profitable, equitable, or as the mediæval jurists called it, the *bonitarian* use. But the Code of the XII. Tables gave no right of action to the Equitable owner.

So if a Creditor sold or transferred a Debt, or Right of action, without the consent of the debtor, he alone possessed the *nudum jus Quiritium*, but the transferee possessed the Equitable right to it.

In order to protect these equitable interests, without directly contravening the fundamental laws of the XII. tables the Prætors gradually created the great system of *Legal fictions*, and these fictions were soon applied to protect the Equitable rights of the Assignees of Debts.

[1] *De Oratore* i., 4.

35. About the year 577 A.C., the *Lex Ælbutia* abolished the old *Legis Actiones*, which were not part of the Code of the XII. Tables, but only a series of writs framed by the Magistrates so as to be adapted to them. New forms of writs were prepared by the Prætorian authority, called *Formulæ*, and these were adopted and extended by two *Leges Juliæ*.[1]

By these new *formulæ* parties were allowed to be represented by *Cognitores*, or *Procuratores*, that is Attornies, who were allowed to sue on behalf of their clients. The Assignee of the Debt was then allowed to use as the *Cognitor*, or *Procurator*, of the Assignor.[2] Gaius gives the *formula* of the writ in such a case.[3]

The Prætor could only grant an *actio directa*, or *vulgaris*, to the original Creditor, but he could grant an *actio utilis*, or *fictitia*, to the Assignee of the debt.[4]

When a Creditor sold his right of action he was said *cedere*, or *mandare actionem*.[5] The Assignee was called *Procurator in rem suam*;[6] and he was acknowledged as the real plaintiff, *si in rem suam datus sit procurator, loco domini habetur:* his mandate could not be revoked; and he owed no account to his principal.[7]

Such was the state of the Law regarding the sale, or transfer, of Debts in the time of Gaius, who is generally supposed to have written his Institutes in the time of the Antonines. They were the text book of Law throughout the whole Roman Empire, when the Romans abandoned Britain, and it is well known now that they are the real source and origin of the Common Law of England; and the Common Law of England with regard to debts is exactly at the present time such as is stated by Gaius.

36. Soon after the time of Gaius, the Emperor Alexander Severus, acting probably on the advice of Ulpian, published a Constitution in the year 224, A.D., by which the absolute freedom of the sale of debts without the knowledge or consent of the Debtor was recognized and allowed.

Digest xviii., 4: 17.—Nomina eorum qui sub conditione vel in

[1] *Gaius* iv., 30. [2] *Gaius* ii., 39. [3] *Ibid.* iv., 86.
[4] *Gaius* iii., 32, 81: iv., 34. *Digest* ii., 14: 16. *Cod.* iv., 10: 2. xxix., 5: 7, 8.
[5] *Digest* xv., 33: 5. xvi., 3: 2. xvii., 1. xix., 1: 31. xliv., 7: 7. xlvi., 3: 76.
[6] *Digest* iii., 30. xvii., 1: 8, 10. xliv., 4: 4, 18, 24.
[7] *Cod.* iv., 10: 1.

diem debent, et emere et vendere solemus. Ea enim res est quæ emi et venire potest.

We are accustomed to buy and sell debts payable on a certain event or on a certain day. For that is Property which can be bought and sold.

Cod., iv., 39 : 3.—Nominis venditio etiam ignorante vel invito eo adversus quem actiones mandantur, contrahi solet.

It is usual to sell a debt without the knowledge, or even against the consent, of the debtor.

It was declared to be lawful to sell all actions, real, as well as personal.

Cod. iv., 39 : 9—Certi et indebitati juris est, ad similitudinem ejus qui personalem redemerit actionem, et utiliter eam movere suo nomine conceditur, etiam eum qui in rem actiones comparaverit, eâdem uti posse facultate.

It is clear and undoubted Law, that just as he who has bought a personal action may sue out a writ in his own name; so he who has bought a real action has the same power.

In the time of Gaius the assignee of the debt could only sue as the attorney of the assignor, as he was obliged to allege the *jus Quiritium*, or the legal estate of the assignor; but the necessity for this was taken away by Justinian, who abolished the *nudum jus Quiritium*, as an antiquated relic of old Roman Law, which was only an absurd enigma which puzzled Law students;[1] and then the assignee could sue in his own name.

Cod. iv., 39 : 7—Visum est post nominis venditionem utiles emptori (sicut responsum est) vel ipsi creditori postulanti dandae actiones.

It is seen that after the sale of a Debt a writ may be granted on the demand of the buyer (as has been decided), or of the creditor himself.

Thus at length the complete emancipation of a Debt from the general rule affecting property held in contract was effected, and it was made as completely and freely saleable as any other chattel.

37. These laws regarding the sale of Debts were fully confirmed and adopted in the Basilica.

Basil, xix, 4 : 16.—καὶ ὅτι τὰ ὑπὸ ἡμέραν καὶ τὰ ὑπὸ αἵρεσιν χρέα πιπράσκονται.

[1] *Cod.* vii., 25.

Debts payable on a certain day and on a certain event may be bought and sold.

Basil, xix., 4: 68.—καὶ ὅτι τὸ ποῦρον χρέος ὑπὸ αἵρεσιν πιπράσκεται καὶ ὑπὸ αἵρεσιν πούρως.

A simple Debt may be bought conditionally, and a conditional Debt simply.

Basil, xix., 4: 27.—ἡ τοῦ γραμματείου πρᾶσις καὶ ἀγνοοῦντος καὶ μὴ βουλομένου ἐκείνου, καθ' οὗ ἐκχωροῦνται αἱ ἀγωγαὶ, δύναται συνίστασθαι.

A Debt may be sold without the knowledge, and against the consent, of the Debtor.

The sale of real as well as personal actions was also confirmed, § 32.

38. We have given these extracts because they contain the history of the subject, and they form the Commercial Law of all Europe, except England.

This investigation clears up a difficulty which has puzzled some modern writers. The earliest Bills of Exchange extant contain no words of negotiability, and yet we know as a fact that they were negotiated. This now is all explained: we have shewn that by the Law of the Roman Empire, fully adopted and confirmed by the Basilica, a Debt might be freely sold. Consequently Bills of Exchange required no words of negotiability to make them saleable; they were so by the Law of the Empire.

These provisions also explain one fundamental distinction between the Law of Scotland and the Law of England as to Instruments of Credit. By the Law of England, a debtor is not bound to accept, or pay, a Bill drawn upon him by his Creditor, without his own consent; and he is not liable to an action for non-acceptance. And unless the Bill be drawn payable to "order" or to "bearer," that is made transferable by the express consent of the debtor, it cannot be assigned, so as to enable the Assignee to sue the debtor in his own name. But by the Common Law of Scotland, a Debtor is bound to accept a Bill drawn upon him by his Creditor, and is liable to an action for non-acceptance. Moreover a Scotch Instrument of Credit does not require any words of negotiability to be inserted: it is assignable at the will of the Creditor, by the force of the Common Law; and the transferee may sue the Debtor in his own name.

And the reason of this difference is simply that the Common Law of Scotland is the Roman Law of the Pandects and the Basilica, while the Common Law of England is the Roman Law of Gaius.

It may seem somewhat strange that so practical a people as the Romans long rejected the advantages of recording the debt on some material, along with the expressed consent of the Debtor to its being transferred. But till after the time of Gaius, although the assignment of debts was freely allowed, yet it was required to be done orally, at a meeting of the three parties, the Debtor, the Creditor, and the Assignee. Gaius says[1] that in his time the Romans did not use written obligations (*chirographa*); they were only used by foreigners. The Emperor Leo about 465 A.D. relaxed the rigorous formalities of the *Stipulatio*, and enacted that a clear consent given in any form of words should be sufficient.[2] In the time of Justinian, written obligations had become usual, and any obligation in writing bound the obligor.[3]

39. The Romans invented banking, we have every reason to believe, and an account will be given in the proper section, how they managed the business. But as far as we are aware, they did not devise that great invention of modern times, namely discounting obligations payable at a future time by means of obligations payable on demand, intended to be of the value of, and to circulate as, money, which has given such a prodigious extension to the system of credit and commerce.

We have, therefore, decisive evidence that the Romans did not use Bills of Exchange for commercial purposes, as many writers have alleged: but they were accustomed to remit drafts upon their correspondents in foreign countries. Cicero writes to Caninius Salustius—

Se ait curasse, ut cum quæstu populi pecunia permutaretur.

He says that he has taken care that a draft for the money should be sent (to Rome) along with the people's share of the profit.

So when his son is going to Athens he writes to Atticus, 24.

[1] *Institut.* iii., 134.
[2] *Institut. Just.* iii., 16, 17, 20. *Digest* xlv., 1. *Cod.* viii., 38 : 10.
[3] *Institut. Just.* iii., 22. *Cod.* iv., 30 : 14.

Sed quæro, quod opus illi erit Athenis, permutarine possit, an ipsi ferendum sit.

But I wish to know whether the money he will require at Athens can be sent by a draft, or whether he must carry it with him.

So again, 15, 15.—

Quare velim cures ut permutetur Athenas quod sit in annuum sumptum.

Wherefore I wish you to take care to send him a draft at Athens for his yearly expenses.

So also, 5, 15.—

Ut vereor, ne illud quod tecum permutavi, versurâ mihi solvendum sit.

So that I fear I must borrow money to pay the draft you changed for me.

On the Principles of English LAW *and* EQUITY *relating to the* TRANSFER *of* DEBTS.

40. Every lawyer knows the oft quoted saying of Lord Coke[1] —"And first was observed the great wisdom and policy of the sages and founders of our Law, who have provided that no possibility, right, title, nor thing in action shall be granted, nor assigned, to strangers, for that would be the occasion of multiplying contentions and suits, of great oppression to the people and chiefly of terre-tenants, and the subversion of the due and equal execution of justice."

Now, without inquiring yet what Lord Coke's qualification of "a stranger" may mean, this *dictum* has been repeated a multitude of times by a long line of judges, both at Law and in Equity, usually with the qualification omitted, so that it has been made to appear in the broadest and most unqualified terms, that a *chose-in-action*, or a debt, cannot by the Common Law of England be assigned, and also as if there were some peculiarity as to the non-alienability of *choses-in-action*, distinguishing them from other property in this respect.

We must now endeavour to investigate what historical truth there may be in this opinion, and in fact what is the true Com-

[1] *Lampet v. Starkey*, 10 *Coke* 46, *b*.

mon Law doctrine as to the sale of *choses-in-action*, or Debts, and place this branch of Commercial Law on a solid basis.

There are, it is true, certain *choses-in-action*, which are declared by law to be absolutely inalienable, and that any attempted alienation of them is a mere nullity, wholly void, and of no effect, and conveying no right whatever to the Assignee. Such are seamen's wages:[1] an officer's pay:[2] an annuity granted out of a rectory.[3]

The current doctrine may perhaps be not incorrectly stated as something of this sort—That *choses-in-action* are not assignable at Common Law—That Bills of Exchange are an exception to the Common Law—That negotiable Promissory Notes are not within the custom of merchants, and that their negotiability entirely depends upon the Act, Stat., 1704, c. 9.

41. In the first place it may be said with all due respect for the fame of Lord Coke, that the reason he assigns for the alleged non-alienability of debts, that it was on account of the litigation it might give rise to, and the "subversion of the due and equal execution of justice" cannot be received as a satisfactory ground at the present day.

The true reason was far deeper, and of a far more general application, and has already been explained. It was this—That whenever Property is held in Contract, or by parties related to each other by any bond, contract, obligation, or *nexus*, neither party can substitute another person for himself at his own mere will and pleasure, and without the consent of the other party.

Moreover, so far from the non-assignability of *choses-in-action*, being an exceptional Rule of property, as it was in Roman Law, it was in fact, the Rule applicable to the enormously greater proportion of Property under the Feudal System, and the Rule of free alienability only applied to the comparatively insignificant amount of personal property.

The essence of the Roman polity was equality and absolute dominion. By the Common Law of the Romans every man

[1] *Act, Stat.*, 1727, *c.* 14, *s.* 7.

[2] *Flarty v. Oldham*, 3 T.R., 681; *Lidderdale v. Duke of Montrose*, 4 T.R., 248; *Barwick v. Reade*, 1 H. Bl., 627.

[3] *Act, Stat.*, 1571, *c.* 20; *Arbuckle v. Lowton*, 3 B. & P.; *Stone v. Lidderdale*, 3 Anst. 533; *Mouys v. Leake*, 8 T.R., 411; *Davis v. Edgar*, 4 Taunt. 63.

was the absolute proprietor of his possessions, including his wife, children, and slaves. He did not live in a state of contract with them. As regarded his *familia*, he was *Dominus ex jure Quiritium;* as regarded his fellow citizens, he was their equal. Consequently the state of Contract between Roman citizens was comparatively rare, principally confined to that of Creditor and Debtor; and also to that of Patron and Client. And as we have already seen, Debts by the early Roman Law, were not assignable without the consent of the Debtor.

But the whole structure of Feudal society was essentially different from Roman Equality and Dominion. The very essence of Feudalism was that the *Dominium* of the soil was vested exclusively in the Sovereign, as the representative of the nation. Absolute property in the soil, either the Dominium of the Romans, or the Allod of the Germans, was impossible in a private person. And says Sir Martin Wright[1]—"It is so absolute a maxim, or principle of the Law of Tenures, that all the lands in England are holden either mediately or immediately of the King, that even the King himself cannot give lands in so absolute and unconditional a manner, as to set them free from tenure."

The Sovereign granted feuds to his followers first during pleasure, then for life, and then in perpetuity, but always on the express condition of certain definite services being rendered. These tenants were consequently in a state of contract with him. They in like manner granted out parcels of their tenures to their vassals on certain conditions, and these vassals again, would have further divided their grants, if they had not been restrained by Law.

42. The result of this was that the whole state of Society was one of Contract. The structure of Roman Society was essentially level; the structure of Feudal Society was essentially pyramidal. Every one from the highest to the lowest was fixed in a state of Contract. The intermediate ranks were in a state of double Contract, both with those above them, and those below them. The consequence was that no one could change his position, or alienate his property, without the consent of the other parties to the Contract, as we have seen was said by Sir Martin Wright.

[1] *Tenures, p.* 137.

Thus, in a state of pure Feudalism, the tenant of land could not substitute another person for himself, at his own will and pleasure, without the consent of the other party, any more than a Creditor, or Debtor, could substitute another person for himself, without the consent of the other party, and for the very same reason—that it was Property held in Contract.

Hence the law relating to *choses-in-action* was not peculiar to them; it was exactly the same as applied to the whole land of the Kingdom. It was simply one example of a universal principle which might be illustrated from many other countries if necessary.[1]

A strict Military Feud was by its very essence and nature inalienable; and such only are called proper Feuds by Feudal writers. But gradually this rigour was relaxed, and Feuds were created assignable, or saleable—"All Feuds, therefore, that are sold, or bartered, for any immediate or contracted equivalent, or that are granted free of all services, or in consideration of one or more *certain* services (whether military or non-military) or upon a Cens, or Rest, in lieu of service; and all such Feuds as are by express words in their creation, or constitution, alienable, are improper Feuds, and are severally treated of by the Feudists under the head of Feuda emtitia, franca, censualia, emptitoria, alienabilia, &c."[2]

Thus, though, no doubt a Feud was originally not alienable, yet wherever the grantor created or constituted the Feud alienable, by granting it to the Grantee and his Assigns, it was assignable, and the assignee was enabled to sue the Grantor in his own name.[3] It also became common for a lessor to grant leases to the lessee and his assigns, and such leases were assignable.

43. The relation between Lord and Vassal, or Landlord and Tenant, is similar to that between Creditor and Debtor; and we have seen that, in the early stages of society, neither party could substitute another person for himself without the consent of the other party.

When, however, the Vassal or Tenant, that is the person who

[1] *Parliamentary Reports on the Land Tenures of India. An account of the Village Communities in India.*

[2] *Wright's Tenures, p.* 33.

[3] *Mallory v. Symond, Y.B.* 9, *Edw. II., pp.* 292, 443.

owed, the service or rent, gave his consent to the transfer of the seignory, he was said to *attorn* to the new seignor. By this public declaration, he recognized the transfer of the Right to his services, or rent.

So long as the Feudal rights were strictly maintained, the attornment of the tenant was indispensable to a grant, or transfer, of the seignory. The Lord could not attorn, or turn over, the homage and service of the tenant to another Lord, against his will; and if the tenant refused to attorn to the purchaser, the grant was void[1] just in the same way the Creditor could not turn over, or attorn, his Debtor to another person without his own consent.

But when the services of the Tenant were reduced to a mere payment of money, and internal peace and security were established, so that tenants were not in danger of being attorned to their enemies, the same principles began to be applied to the relation of Landlord and Tenant as had already been applied in Roman Law to that of Creditor and Debtor. It was of no real prejudice to the Debtor to whom he paid his money, so long as he was not called upon to pay it twice. So it was no real prejudidice to a Tenant, to whom he had to pay his rent, so long as he had not to pay it twice. The doctrine of attornment was felt to be a burdensome restraint on the alienation of land, and many methods were adopted to evade it. In all cases where the Statute of Usage and the Statute of Wills applied, attornment was unnecessary, and many other cases are given in Comyn's Digest, *Attornment* L.

Between the time of Littleton and Coke, a further step was made in the alienability of grants, for in several cases the tenant, if he refused, might be compelled to attorn.[2]

At last the doctrine of Attornment, as regarded grants and conveyances, was entirely swept away, and abolished, by Act, Statute 1705, c. 16, ss. 9, 10, and estates in land were made freely transferable without the consent of the tenant. This Act of Anne is precisely parallel with the Statute, or Constitution, of Alexander Severus, mentioned in the preceding section, declaring that Creditors might freely transfer their Rights of action without the knowledge, or consent, of the debtor.

[1] *Bracton*, 2, 35, 13. *Litt.* 551, 567, 568.
[2] *Coke, Litt.*, 315 *b.*, 316 *a.*

By these means, in the course of many centuries, a complete revolution was effected in the law relating to estates in land, which are of the nature of *Choses-in-action*. Whereas originally they were absolutely inalienable unless they were expressly created assignable, at the present day, all estates in land are freely and absolutely transferable, unless granted with an express stipulation to the contrary; and even in many cases such a stipulation is void.[1]

We have thus shewn that the course of the development of the right of the alienability of estates in land in England is precisely parallel to that of the doctrine of the alienability of Debts in Roman Law.

44. We have now to trace the course of the development of the doctrine of the alienability of Debts, or *choses-in-action*, at Law and in Equity in England.

Glanville, the earliest writer on the Common Law, gives us much information as to the mode of proceeding for the recovery of debts in the King's Court, but says nothing of their transfer.

Bracton adopts the division of Property into Corporeal and Incorporeal,[2] and after describing the different species of obligations,[3] he states the method in which they were discharged. After saying that they may be discharged by payment, release (*acceptilatio*), and renewal, he continues—"Also by *novation*, as when the obligation is transferred from one person to another who takes it upon himself. For by the intervention of a new person a new obligation is created, and the first is taken away, as in the case of money, when any one has taken upon himself the obligation of another."

Thus we see that Bracton expressly adopts the Roman doctrine of *Novation;* that is where a debt is transferred by the express consent of the debtor, the assignor is released, and an obligation is created between the assignee and the original debtor, giving of course a right of action.

Thus Bracton expressly lays down the doctrine that if the Debtor, the Creditor and the Assignee agree to it, the debt may be transferred.

45. As Feuds and Charters came to be granted to the grantee

[1] *Stephen's Blackstone* i., 469. [2] *De Leg. Ang.* i., 12, 3. [3] *Ibid.* iii., 2, 13.

and his assigns, which were held to be assignable, so as to give the Assignee a right of action in his own name against the grantor, so annuities, which were more distinctly recognized as *choses-in-action*, came to be granted in exactly the same form, and it was expressly decided in a series of cases, that the Assignee of an annuity created assignable by the words of the Grantor, had a right of action in his own name.

The first case was in 1368.[1] Three priests, the Assignees of John, Bishop of Hereford, brought an action against the Abbot of T. for arrears of an annuity which had been granted by him. It was pleaded that they could not sue as assignees of a *chose-in-action*, but the Court held that they might.

The next case confirmed this doctrine.[2] Brook the parson of Bosworth granted an annuity to the Grantee and his assignees during his lifetime. The grantee assigned it, and the Assignee brought an action against the Grantor for arrears. The defendant demurred, alleging that such an annuity could not be granted over. But four Justices unanimously held that the action was good.

The next case[3] may be said to have set the question completely at rest. Gregory had granted a rent-charge by deed to one and his assignees for his life. The grantee assigned it over, and the assignee distrained for arrears. It was resolved by the Court that a Rent charge, or *chose-in-action*, granted to one and his assigns, may be assigned over by the express words of the grantor, who granted it to him and his assigns, for *modus et conventio vincunt legem*.

This doctrine was finally settled in another case,[4] which was an action by the assignee of an annuity. It was argued that it was contrary to the nature of an annuity to be assigned over, and that it was a matter of common learning that a thing in action cannot be assigned over, unless by grant of the King. But the Court unanimously held that the annuity might be granted over. And since this case the doctrine has never been questioned.

These cases establish beyond dispute, that the doctrine of the Common Law relating to the alienability of *choses-in-action* is exactly the same as governs all other property held in contract. It cannot be transferred without the consent of the Debtor; but

[1] *Three Priests' Case*, *Y. B.* 41, *Edw. III.*, *p.* 27.
[2] *Baker v. Brook*, 3 *Edw. VI. Dyer*, 65, 1.
[3] *Maund v. Gregory*, 7 *Coke* 28 *b*, 43 *Eliz.* [4] *Gerard v. Bowden*, Hetley 80, 3 Car. 1.

wherever an obligation is created assignable by the express consent of the obligor, whether that consent be expressed verbally, or in writing, such an obligation is assignable, and the assignee has an action against the obligor, because *modus et conventio vincunt legem.* Common Law allows perfect freedom of contract. If A contracts to pay only B, then only B can demand payment. But if A contracts to pay B or "assigns" or "bearer" then the assignee, or bearer, may demand payment, because by the fact of the obligor's consent having been given in the very creation of the contract, a privity of contract is established between him and the bearer.

46. The next point to be considered is how the Common Law of England overcame the difficulty when the Debtor did not give his consent to the transfer of the Debt. We have seen that Roman Equity evaded the direct provisions of the Code, by allowing the assignee to sue as the attorney of the assignor. But English Law had not the same restrictions as Roman Law, and as early as Henry VI. we find that the assignee might sue in the name of the assignor; or the assignor may sue as the trustee for the assignee. English Law has not yet arrived at the simplicity of the Roman Law, in sweeping away this last formality in the case of *choses-in-action*, as the Act of Anne swept away the doctrine of attornment. The attornment of the debtor is still necessary to enable the assignee to sue in his own name. But both Equity and Law will compel the assignor to allow the assignee to use his name.

The still existing rule of Law, then, which requires the consent of the obligor to enable the assignee of the obligation to sue in his own name, is simply the last relic of the doctrine of attornment; and it only requires this restriction to be swept away to bring English Law to the same state as Roman Law, Equity, and the Common Law of Scotland, and to assimilate the Law of *choses-in-action* to that of estates in land, as enacted by the Statute of Anne abolishing attornments.

Equity adopting the Roman Law in the state of its full maturity, always held that the Creditor had a perfect right to transfer his Right of action, without the consent of the debtor, and if he does so, will compel the assignor to complete his contract to the assignee by allowing him to use his name to sue the obligor

The doctrine then of the non-alienability of *choses-in-action*, is therefore, a mere shadow of its former self. And it seems scarcely in the spirit of the age to maintain such an illusory restriction. Compelling an assignor to allow his assignee to sue in his name, is practically speaking compelling the obligor to attorn to him. Hence the free alienability of debts is now the *reality*, and the old Common Law doctrine is now the *fiction*.

How far a statute, similar to the statute of Anne abolishing attornments, may be necessary to sweep away this last remaining fiction, or how far the Courts of Common Law may feel themselves authorized to abandon it, this is not the place to inquire. It is a matter of common notoriety that the Courts of Common Law have largely adopted Equitable doctrines, and the arguments of two very eminent judges would certainly seem to sanction the opinion that the Courts of Common Law might abandon this antiquated fiction of their own authority. ASHURST, J., said[1]—"It is true that formerly the Courts of Law did not take notice of an Equity, or a Trust; for Trusts are within the original jurisdiction of a Court of Equity. But of late years it has been found productive of great expense to send the parties to the other side of the Hall: wherever the Court has seen the justice of the case has been clearly with the Plaintiff, they have not turned him round on this objection. Then if this Court will take notice of a Trust, why not of an Equity?"

In another well known commercial case BULLER, J., said[2]—"It is laid down in our old books that for avoiding maintenance a *chose-in-action* cannot be assigned, or granted over to another. The good sense of that rule seems to me very questionable; and in early as well as modern times, it has been so explained away, that it remains at most only an objection to the form of action in any case. . . . I see no use in preserving that shadow when the substance is gone."

And the same eminent Judge said in another case[3]—"During the fifteen years that I have sat on this bench, I have never known any case which established a distinction between Courts of Equity and Law on subjects of this kind. I have always thought it highly injurious to the public that different rules should prevail

[1] *Winch v. Keely*, 1 T.R., 619. [2] *Master v. Miller*, 4 T.R., 320.
[3] *Tooke v. Hollingworth*, 5 T. R. 215.

in the different Courts on the same mercantile case. My opinion has been uniform on that subject. It sometimes, indeed, happens that in questions of real property, Courts of Law find themselves fettered with rules from which they cannot depart, because they are fixed and established rules; though Equity may interpose not to contradict, but to correct the strict and rigid rules of Law. *But in mercantile questions no distinction ought to prevail.* THE MERCANTILE LAW OF THIS COUNTRY IS FOUNDED ON PRINCIPLES OF EQUITY, AND WHEN ONCE A RULE IS ESTABLISHED IN THAT COURT AS A RULE OF PROPERTY, IT OUGHT TO BE ADOPTED IN A COURT OF LAW.

47. The true Common Law doctrine as to the transferability of debts may be stated thus—

1. If the obligor grants the obligation to the obligee alone, an assignee of the obligation cannot sue the obligor in his own name.

2. But he may sue him in the name of the obligee.

3. If the obligor grants the obligations to the obligee and his "assigns" or to his "order" or to "bearer," thereby giving his express consent to its alienation, the obligor may freely assign it, and the holder of it has a Right of action against the obligor, for he is bound by his own contract, and *modus et conventio vincunt legem.*

The importance of establishing this doctrine is well known to every one who has studied the common opinion on this subject.

Upon INSTRUMENTS *of* CREDIT.

48. Credit, then, being an Exchangeable Right, or an Economic Quantity, that is Wealth or Merchandize, which may be bought and sold, cannot of course in that form, be the subject of manual delivery. But the Greeks invented the plan of recording this Right on a material, and when this was done, the Right itself was capable of manual delivery like any other chattel. This written promise was called χειρόγραφον, a note-of-hand.

The Romans did not use written obligations till some time between Gaius and Justinian, and then they adopted the Greek name; and a creditor who held a written obligation of his debtor was called *Cheirographarius Creditor.*

In modern times there are several forms of such obligations in common use, and it is of advantage to have a generic name for them all. In some old cases in our Reports they are called Instruments of Debt, and in recent times they are very usually called INSTRUMENTS *of* CREDIT.

In Roman Law, *Instrumentum* was a general name for all evidence written, or personal, by which a claim could be proved.[1] In English Law the word "Instrument" is restricted to a written document containing the evidence or record of some fact. An "Instrument of Credit," therefore means the *written* evidence of a debt.

Instruments of Credit are of four forms:—1. *Orders* to pay money. 2. *Promises* to pay. 3. *Credits* in banks, termed *Deposits*. 4. A mere acknowledgment of a debt, usually termed an I O U.

49. The Roman lawyers brought the Theory of Credit to a state of perfection. But the practical development of it was comparatively feeble, because though debts were assignable, and the law contained all the principles which govern the negotiation of Bills of Exchange, written obligations were not used by them till a very late period.

It is needless to inquire how far commercial paper was used in the Byzantine Empire. It is sufficient to say that for all practical purposes, the modern system of Bills of Exchange took its rise about the end of the 12th century.

The power and the arrogance of the Popes had long been increasing, till in the time of the Crusades they claimed the right to tax all Christendom for their support. They had their own money dealers termed *Cambiatores*. These were persons who kept tables in the Cathedrals to exchange the money of foreigners who came to worship. These persons sent their own agents into different countries to collect the Papal tribute. As soon as they had collected a sufficient amount, they sent the Pope drafts upon their principals for the amount. These drafts were termed *Litteræ Cambitoriæ*,—money changers' drafts. These drafts were naturally in the form of an order upon their principals to pay a certain sum of the money of the country they were in, at a certain rate of exchange in Italian money. The use

[1] *Digest*, xxii, 4 : 1.

of them spread rapidly to commerce, and there are said to be laws of the Venetian Senate speaking of *litteræ cambii* in the 13th century. In the middle of the 12th century, the Florentines took up the business of money dealing to a great extent, and their example was soon imitated by other Italian cities, such as Lucca, Asti, Sienna, Milan, Placentia. Cahors in France, also, became celebrated as a monetary centre; and the name of *Caorsini* became synonymous with usurers, and Dante[1] places them in the infernal regions, in very strange companionship, for this imaginary crime. The earliest Bill of Exchange known to exist was drawn in 1380. Another is quoted by Capmany, an eminent Spanish writer, dated 1404, which was drawn by a Lucchese merchant of Bruges on his correspondent at Barcelona, and negotiated in Bruges, but dishonoured in Barcelona. In the archives of Venice there are many Bills of Exchange of the 15th century, drawn by Venetian merchants on their correspondents in London, and sent back protested for non-payment. In none of these bills are there any words of negotiability; just as there need not be in a Scotch bill at the present day. Many writers have been puzzled to know how Bills of Exchange came to be negotiable. Some attribute the invention to Cardinal Richelieu. But the preceding investigation has completely cleared away all mystery on the subject. They were negotiable by the Constitution of Alexander Severus, of 224 A.D., adopted in the code of Justinian, which was the Law of all Europe.

But obligations, by the Common Law of England were not payable to any one but the Payee, without the consent of the Obligor. Accordingly we find that at a very early period it was usual to make Obligations payable to the obligee and his Attorney, which was equivalent to the modern "or order." Matthew Paris[2] quotes the form of an Obligation of the Friar and Convent of N., dated 1235, and made payable to certain Milanese merchants in London "aut uni eorum, vel eorum certo nuncio."

50. It is commonly supposed that Bills of Exchange were only in use among foreign merchants, and that Obligations in the form of *Promises* to pay were wholly unknown to commercial usage, and the Common Law, and that such an Obligation was not assignable at Common Law, even though containing words of negotiability.

[1] *Inferno, Cant.* xi., *l.* 50. [2] *Hist. Ang., p.* 418.

This however is a complete error. There exists a work containing many of the customs of London in the reign of Edward IV. and Henry VII., usually called Arnold's Chronicle. In this, several forms of Obligation are given, as those in common use in the reign of Edward IV., and among these, are forms of Bills of Exchange drawn as Promissory Notes, *payable to bearer;* and also common Promissory Notes, payable to the Payee and his *Attorney*, or his *Assigns*.

As these documents are very little known, we may cite two of them. The following is given as the form of a Bill of Exchange (p. 118, Edit. 1811):—

LETTRE OF EXCHAUNGE.

Be it knowen to alle men yt I R. A. citezen and habd' of London have ressd by exchaunge of N. A. mercer of the same cite xx. li. stg. whiche twenty ponde stg. to be payd to the said N. or *to the* BRINGER OF THIS BYLL, in synxten marte next comyng for vi. s. viij. d. stg. ix. s. iiij. q. flg. money currant in the said mart, and yf any defaut of payment be at the day in alle or any part yerof that I promyse to make good all costis and scathes that may grow therby for defaute off payment as well as the principal some bec this my furst and seconde lettur of payement, and herto I bynde me myn executors and alle my goodis whersoever they may be founde. In wytnesse wherof I have written and sealyd this byll the x. day of Marche Ao. Dni. M.CCCC. lxxxij.

Besides this Bill of Exchange there are given several forms of the documents, which in modern language are called Promissory Notes. Most of these are made payable to the payee and his attorney, but one form given is this (p. 106):—

BYLL OF PAYMENT.

Memorand' this byll made the iiij. day of Julij in ye xix. yere of the reigne of Kyng Edward the iiij. beryth wytnesse yt we Ric. Shirlee of London grocer and Thomas Shirlee of London habard' owen unto W. Warboys and John Benson of London habard' xxxviij. s. ij. d. stg. to be payd to the said W. & J. or to ether of them, to their eyers, ther executors or *to their* ASSIGNES, ye furst day of Julij next comyng wythout ony delay, to the whiche payment wel and truly to be made we binde us our eyers, executors and our assignes, and eche of us in the hoole. In wytnesse wherof we set to oure seales the day and time afore rehersed.

These common forms establish the fact that in the time of Edward IV., it was usual to draw Bills of Exchange in the form of Promissory Notes, and to make them payable to bearer; and also that Promissory Notes payable "to order" or "to assigns" were in common use. There is no reason to suppose that they originated at that period; on the contrary, as

they are given as common forms, we may fairly conclude that they must have been long in use; but how long, it is impossible to say.

Mr. Lawson [1] also gives a copy of Bill of Exchange drawn in the form of a Promissory Note, in the time of Elizabeth :—

"Witnesseth this present bill of exchange, that I, Robert Anderson, merchant of the city of Bristowe, doe owe unto Thomas Mun, merchant of the said city, the summe of 100 ducats; I say an hundred duckets of currant monie of Spain, accompting after 11 rials of plate to the ducket; to be paid unto the said Thomas Mun, *or his assignes*, within 10 daies next and ymmediately after the safe arrivall of the good ship called the Gabriel of Bristowe to the port of S. Lucai in Andalousia in Spaine, or any port of the discharge. And for the true paiment thereof, I, the above named Robert Anderson do bind me, my goods, my heires, executors, and assignes, firmly by these presents. In witnesse of the truth, I have caused two of these bills to be made (the which the one being paied, the other to be voide) and have put my firme and seale unto them, and delivred them as my deed in Bristowe, the 15th day of September, 1589, and in the 31 yeere of our Soveraigne Queene Elizabeth her Majesties reigne."

From this it is clear that the custom of drawing Bills in the form of Promissory notes still continued; and also that these early Instruments of Credit were Deeds, or Specialties, and not mere parol contracts, as they are considered at present, and therefore they were valid without any consideration at all.

Now it has been shewn in the preceding section, that the true Common Law doctrine was that the rule of law that a *chose-in-action* could not be assigned, was for the benefit of the Obligor, but that if he himself waived that protection of the law, and expressly consented that the obligation should be made assignable, then such an obligation was assignable. From this it appears that negotiable Instruments of Credit of both forms, *orders* and *promises* were in common use at least as far back as the time of Edward IV., and that they were assignable by Common Law.

51. Considerable obscurity prevails as to the subsequent history of Negotiable Paper. The next writer on the subject is Gerard Malynes, a London merchant, who published his *Lex Mercatoria* in 1622. It is remarkable that he expressly says that Bills Obligatory, or of Debt, which, as has been shown above, were in common use in London in the reign of

[1] *History of Banking*, p. 38.

Edward IV., were not used in England. In chapters 11, 12, and 13 he gives a full account of these bills, which were used by the merchants of Amsterdam, Hamburg, Middleborough, and other places, and explains their great utility; but he says (p. 71)—"The Common Law of England is directly against this course; for they say there can be no alienation from one man to another of debts, because they are held *choses-in-action*, and such whereof no property can pass by assignment or alienation:" so (p. 73)—"This laudable custom is not practised in England."

Marius, the next writer of authority, in 1651, gives several forms of Bills of Exchange, all in the form of *orders* to pay. He takes no notice of the Bankers' or Goldsmiths' notes, which were certainly then in circulation, but at p. 6, he speaks of the custom of offering payment of an acceptance, by means of a "note on a Goldsmith." These "notes," or "cash notes," as they were called, were the origin of the modern CHEQUE.[1]

Though Marius does not notice Promissory Notes there is abundant evidence, soon after his time that they were in common use. In 1680 an action[2] was brought upon a sealed note payable to bearer, and its legality was fully recognized. The Court said—"When a merchant promises to pay to "the bearer" of the note, any one that brings the note shall be paid"; and JONES, J., said—"The custom of merchants made that good." In another case[3] in 1681, the bearer of a Bill of Exchange payable to bearer was held entitled to receive on proving consideration. In 1696,[4] a Promissory Note payable on demand, was declared upon as a Bill of Exchange, and TREBY, C. J., fully recognized it as such, and said it was legal. In 1693, a Promissory Note was declared upon as a "*Billa* or *Nota*" and within the custom of merchants, and the declaration was held good.[5] And the same was held in other cases.[6]

Thus the existence of these documents, and their use among merchants, was distinctly recognized, and sanctioned by these decisions, which were in perfect harmony with the uniform

[1] *Grant* v. *Vaughan*, 3 Burr., 1516. *Tate* v. *Hilbert*, 2 Ves.. jun., 111.
[2] *Shelden* v. *Hentley*, 2 Show., 1601. [3] *Hinton's case*, 2 Show., 235.
[4] *Bromwich* v. *Lloyd*, 2 Lutw., 1583. [5] *Williams* v. *Williams*, Carth., 269.
[6] *Pearson* v. *Garrett*, Comb., 227. *Lambert* v. *Oakes*, 1 Ld. Raym., 443. *Carter* v. *Palmer*, 12 *Mod.*, 380.

tenor of the former decisions, above quoted, as to the assignability of *choses-in-action*, when made assignable by the Obligor himself. But soon a strange conflict of decision took place, and a warm dispute arose between the City and the Court of King's Bench presided over by Lord Holt.

In a series of cases[1] it was held that the "bearer" had no *right* of action against the acceptor or maker, of a Bill or Note payable to bearer—that Promissory Notes were not within the custom of merchants—and that they could not be declared upon as Bills of Exchange. In the last case mentioned above, Lord Holt expressed himself very strongly against Promissory Notes payable to bearer, which he said were only an invention of the goldsmiths in Lombard Street. The Chief Justice had a conference with some eminent merchants in the City, who told him that such notes had been in common use for about 30 years, and were looked upon, and transferred by indorsement, as Bills of Exchange. The Court, however, decided against them. In consequence of these decisions, the Act, Stat. 1704, c. 9, was passed, placing Promissory Notes in all respects on the same footing as inland Bills of Exchange.

How the strange facts are to be accounted for—that Bills of Exchange in the form of Promissory Notes payable to bearer, and Bills of Payment, or Notes payable to assigns, or order, were in common use in London, in the 15th and 16th centuries, and then had totally disappeared at the beginning of the 17th century, and reappeared at its close, but were supposed to be then a new species of document, so that their former use was not known—it is not easy to say.

52. We must also especially remark that the name of Promissory Notes seems only to have been finally adopted for these Instruments since the Statute of Anne. Before that time they were called Bills of Payment, Bills of Debt, Bills of Credit, Bills Obligatory; Bank Notes were called Bank Bills. In the Act establishing the Bank of England its Notes are termed "Bills of Credit" and "Bills Obligatory." In one case[2] a note

[1] *Hodge* v. *Steward*, 1 *Salk.*, 125; *Horton* v. *Coggs*, 3 Lev., 299, in 1691; *Nicholson* v. *Sedgewick*, 1 Ld. Raym., 180, 1698; *Cogg's Case*, Comb., 466, in 1699; *Carter* v. *Palmer*, 12 Mod., 389, in 1701; *Clerke* v. *Martin*, 2 Ld. Raym., 757; *Culting* v. *Williams*, 2 Ld. Raym., 825, in 1703; and *Buller* v. *Crips*, 6 *Mod.*, 29, in 1704.

[2] ——— v. *Elborough*, 3 Keb. 765.

for the payment of money is termed an inland bill by the Court. In another case[1] two goldsmith's or banker's notes were declared upon as Bills of Exchange, and they are called "bills" throughout the case. Again, it is said[2]—"If a merchant's apprentice draws a *bill* (as 'I do promise to pay such a sum for my master') to charge the master with this *note*." So in several cases[3] Bank Notes are called bills. In many parts of the country at the present day bank notes are always called bank bills, and the term bank *notes* would not be understood.

The common opinion therefore that Promissory Notes are not transferable at Common Law, and that they were unknown to Commercial usage, until comparatively recent times, dating only from the end of the 17th century, is entirely erroneous both in Law and Fact. Obligations in both forms were equally called Bills and Notes, and are equally valid at Common Law. *Non figurâ litterarum sed oratione quam exprimunt litteræ obligamur.*[4] A Bill of Exchange in former times meant nothing more than an obligation to pay the value of a certain amount of the money of one country in the money of another, at a certain rate of exchange; and it was perfectly common to draw the obligation in the form either of an ORDER or of a PROMISE; and both forms were perfectly valid. When the obligation was to pay in the money of this country it was called an Inland Bill, whether its form was that of an Order or a Promise. The words *Billa* or *Nota* mean nothing more than a writing.

Since, however, the series of erroneous decisions in the King's Bench which gave rise to the statute of Anne, the word BILL has been restricted to ORDERS to pay; and the word NOTE to PROMISES to pay.

Hence in reading old cases and books it must be observed that the words Bill or Note were used synonymously to denote any written obligation: in modern cases and books they are used to mark the *distinction* between ORDERS to pay and PROMISES to pay.

One great establishment still keeps up the old hybrid form of

[1] *Hill v. Lewis*, 1 Salk, 131. [2] *Boulton v. Hillesden*, Comb., 450.
[3] *Anonymous*, 1 Ld. Raymond, 738. *Nicholson v. Sedgwick*, 1 Ld. Raym., 180. *Bank of England v. Newman*, 12 Mod., 241. *Anonymous* 1 Salk., 125. *Lambert v. Oakes*, 1 Ld., Raym., 443.
[4] *Digest*, xliv., 7: 37.

the obligation in a species of paper it issues; the following is the form of a

BANK *of* ENGLAND POST BILL.

No._____ *London,*_____ 18____

At seven days' sight I promise to pay this my sola *Bill of Exchange to*_____ *or order* ONE HUNDRED_____ *sterling value received of* _____.

For the Governor and Company of the Bank of England.

£ ONE HUNDRED.

Entd. _____

On BILLS *of* EXCHANGE *and* PROMISSORY NOTES.

53. In its most general form, a Bill of Exchange is a letter from a Creditor to his Debtor, ORDERING him to pay—first, a certain sum of money; secondly, to a certain person; thirdly, at a certain event. The usual form is this:—

£287 : 15 : 8 *London, May 4th*, 1872.

Three months after date, pay to myself (or A. B.), or order, the sum of Two Hundred and eighty-seven pounds fifteen shillings and eight pence, value received.

To Mr. John Cox, WILLIAM SMITH.
Linendraper,
Strand, London.

The person who addresses the letter is termed the *Drawer;* the person to whom it is addressed is called the *Drawee;* and the person to whom it is to be paid is called the *Payee.*

It is the payee's business, on the first convenient opportunity after he has received the letter, to present it to the drawee, to know if he will pay it; if he consents to do so, it is usual for him to write his name, with the word "accepted" across the face of the bill; he is then called the *Acceptor.*

The drawer may make the bill payable either to a third person, or to his order, or to himself, or to his own order. If it be made payable to a third person only, or to the drawer himself only, without inserting the words "or order," the bill can only be paid to the person named, and cannot be transferred to any one else, or cannot be *negotiated,* as it is termed.

If the words "or order" are inserted after the payee's name, he can transfer it to any one else. This is done by writing his name on the back of the bill; hence it is called an *Indorsement*: the person who does it is called the *Indorser*, and the person to whom it is delivered is called the *Indorsee*.

The indorsee may, if he pleases, indorse it again to some one else, and if he make it payable to that person only, it is called a *special* indorsement, and can only be paid to him; but if he delivers it over with his own name only written on the back, it is called a *general* indorsement, or an *indorsement in blank*. Its effect is that it makes the bill transferable by mere delivery, without any further indorsement, exactly like a bank note or money; and the bill is then *payable to bearer* like a bank note.

Formerly indorsement was in all cases *necessary* to transfer the property in a bill or note. But this has long ceased to be the case in English law. It became the custom of merchants in England, which has long acquired the force of law, that any instrument of credit indorsed in blank, may be transferred by simple delivery, without any further indorsement.

It is still, however, the custom to indorse them on a transfer; at least there are very few persons who would take them without indorsement. And the effect of the indorsement is this: that if the bill be not paid by the acceptor at maturity, and if the owner, or *holder*, of it gives *immediate* notice to any, or all, of the preceding parties to it, he has a right to enforce payment of it from them.

But this demand for payment must be made without delay, in almost all cases within twenty-four hours after the fact of non-payment is known to the holder. If delay be made in notifying the fact, and demanding payment from the parties liable, they are absolved, and the holder's remedy is gone.

Thus in modern practice the indorsement is merely a *limited warranty of soundness*. There is no other difference between buying goods or money with a bill, with or without an indorsement, than between buying any other article such as a horse, a watch, or a carriage, with or without a limited warranty. It is in all cases a sale. In the case of a bill taken without an indorsement, or a horse bought without a warranty, the sale is final and conclusive; in the case of a bill taken with an indorsement, or a horse bought with a warranty, the sale may be

cancelled, if the defect be discovered, and the demand made within the time limited, otherwise it is also final and conclusive.

The general rule of English law is now, that if any instrument of Credit whatever, whether it be a Bank Note, or a Bill of Exchange, be taken in exchange for goods or money in any transaction without indorsement, or if the period allowed for making a claim be suffered to elapse, it is a final closing of that transaction, and the receiver has no remedy against the transferor, if the instrument be not paid. *The payment is, in fact, in all respects, as valid and final as if it were money.*

Except only in the case of fraud, where the payer knew that the banker or person whose note or bill he tendered, was bankrupt or insolvent.

It is usual, in English Bills, to insert the words "value received," but it is not necessary. In former times it was necessary to state what the debt arose from, whether money or goods. But this has long fallen into disuse in this country.

A Promissory Note is an absolute promise to pay (1) a certain sum of money (2) to a certain person, (3) at a certain time: it is usually expressed thus—

£143 : 4 : 9. *London, May 4th*, 1872.

Three months after date, I promise to pay John Stiles or order, the sum of One hundred and forty-three pounds four shillings and nine pence, for value received.

Timothy Gibbons.

In this case, Timothy Gibbons is called the *Maker* of the note, and John Stiles the *Payee.*

Promissory notes, of all sorts, including Bank of England notes, as well as the notes of private bankers and merchants, were all placed exactly on the same footing as inland bills of exchange by the Acts, Stat. 1694, c. 20, s. 29; and Stat. 1704, c. 8, that is, they were all made tranferable by indorsement on each separate transfer.

In the case however of bank notes (by which, in law, is always meant Bank of England notes), as these were always payable on demand, and the payment was quite secure, the practice of indorsement soon fell into disuse, and they passed from hand to hand like money. In the case of private bankers of great name, the indorsement was often omitted. But, though the

ceremony of indorsement was often dispensed with as superfluous, it must be observed that in no way altered the character of the instrument, and the receiver of the note took it entirely at his own peril, and ran exactly the same risks as if he took any other instrument of credit without indorsement.

54. If any readers of this work should happen to be acquainted with our *Theory and Practice of Banking*, 2nd edit. 1866, they may perhaps be greatly surprised to see that, though the facts and the system of credit given here, are the same as those set forth in that work, yet our statement of the Law of the subject is perfectly different now to what it was then. The explanation of this extraordinary difference is this; that in the former work we stated the Law according to the current doctrine which may be heard in Westminster Hall, in a special pleader's chambers, or in the common text books. But since that work was published, we were selected by the Royal Commissioners for the Digest of the Law to prepare the National Digest of the Law of Credit. In the preparation of this great national work we could not rest satisfied with the loose, vague, ill-defined, notions floating about Westminster Hall. It became necessary to trace every single principle through the whole course of English Law to its very sources; and to reduce to absolute precision the shifting and conflicting doctrines in the various cases. It was also necessary to investigate thoroughly the Theory of Credit as developed in Roman Law. The result of this investigation was to shew that the common notions on the subject prevalent among English Lawyers, are completely erroneous both in fact and Law. Pages of our common text books must be scored out. All that we find in them stated about the transfer of *choses-in-action* being contrary to the Common Law, and only adopted from the Law Merchant is pure rubbish, and must be consigned in future to the limbo of myths. We proved by a series of cases traced through 500 years that in every case where a *chose-in-action* was originally created transferable by the consent of the obligor, the Courts of Law have invariably held that the transferee might sue the obligor in his own name. Yet such is the vitality of error, that it is one of the stock *dicta* of Westminster Hall, that *choses-in-action* are not assignable by Common Law. Not only was the series of cases in which Lord Holt

refused to recognize Promissory Notes as legal documents quite contrary to the principles which had been invariably followed for three centuries; but Lord Mansfield expressly declared them to be founded on erroneous principles;[1] and Lord Kenyon, well known as a stickler for the strictest rigour of the Common Law, concurred in this opinion. The whole system of Bills and Notes is strictly legal at Common Law. Moreover it was quite clear that the flimsy reason given by Lord Coke was quite inadequate to explain the case. The Law affecting the transfer of Credit is only an example of a very wide principle of jurisprudence, founded on the very nature of things. Roman Law went through exactly the same phases as English Law is doing; and it seems somewhat strange that the Law of the Romans, who were not a commercial people, reached a much greater state of perfection than the Law of a great commercial people like the English. And the reason is that the Roman Law was worked out by a series of illustrious jurists with whom we have none to compare. Where is our Gaius, or our Modestinus, our Javolenus, our Ulpian, or our Papinian? Alas! we have none such. We have no philosophic jurists, only matchless legal practitioners.

English law on the transfer of Credit is only a case of arrested development. Three-quarters of a century ago, Justice Buller justly stigmatized the absurdity of having two conflicting systems of jurisprudence to decide the same mercantile case in the same country. We think that it may be of use to present the principles of Law and Equity regarding the transfer of Credit as stated in our Digest.

Commencement of the DIGEST *of the* LAW *of* CREDIT, *prepared for the Law Digest Commissioners.*

1. (1.) Credit, or Debt, in legal and commercial language means a Right of action against a person for a sum of money. Such a right is a *chose-in-action.*

(2.) The person who owes the money is termed the DEBTOR; the person to whom it is owed is termed the CREDITOR, and sometimes the DEBTEE.

2. At Common Law a creditor cannot transfer his debt, or right of action, to a third person without the consent of the

[1] *Grant v. Vaughan*, 1 Bla. 485.

debtor, so as to enable the transferee to sue the debtor in his own name.

3. But whenever the debtor assents to the transfer of the debt, or *chose-in-action*, either orally, or in writing, the assignment of it by the creditor is irrevocable, a trust is created, and the assignee may sue the debtor in his own name.

4. If the debtor does not consent to the transfer of the debt, or right of action, the transferee may sue him in the name of the transferor, and equity assumes that the transferor always gives him this permission.

5. In Equity a creditor may transfer his debt, or right of action, with or without the consent of his debtor.

6. A written contract by which one person is bound to pay (1) a certain sum of money (2) to a certain (3) at a certain time, is termed an OBLIGATION, or SECURITY for MONEY, or a VALUABLE SECURITY.

7. (1.) A written ORDER from one person to another who owes, or appears to owe, him money as a debtor, directing him to pay absolutely, and, at all events (1), a certain sum of money (2) to a certain person (3) at a certain time, is in modern language, termed a BILL of EXCHANGE, or shortly a BILL.

(2.) A written PROMISE made by one person to pay absolutely and at all events (1) a certain sum of money (2) to a certain person (3) at a certain time, is, in modern language, termed a PROMISSORY NOTE, or shortly a NOTE.

8. A written ORDER addressed by one person to another who holds a fund, not as his own property, but merely as the AGENT, BAILEE, TRUSTEE, or SERVANT of the writer, to pay a sum of money, is termed a DRAFT, or ORDER, for the payment of money.

9. A mere acknowledgment of a debt, not containing any promise to pay, is usually termed an I O U.

10. (1.) A bill, note, or I O U, is always a *chose-in-action*, that is it operates as a charge, or credit, against the person of the debtor.

(2.) A draft, or order, is always a *chose-in-possession*, and it operates as a charge, or credit, against the fund.

Section III.

On the Limits and Extinction of Credit.

On the Limits *of* Credit.

55. In the preceding sections we have clearly shewn that Credit is the name of a species of Incorporeal Property, which is of the same nature as, but inferior in degree to, money; and that it fulfils exactly the same functions as money as a Medium of Exchange, or Circulation: also that it is Property cumulative to money; that is, that it is over and above, or additional to, the quantity of money in use. In the following sections we shall exhibit the actual mechanism of the System of Credit, and shew how it is the great productive, or circulating, power of modern times. Credit, in fact, is to money what steam is to water: and, like that power, while its use within proper limits is one of the most beneficial inventions ever devised by the ingenuity of man, its misuse by unskilful hands leads to the most fearful calamities. Credit, like steam, has its limits, and we have now to investigate the proper Limits of Credit, and the various methods by which it may be extinguished. Because by its very name and its very nature, it is always created with the express intention either of being, or of being capable of being, extinguished. It is Unextinguished Credit which produces these terrible monetary cataclysms which scatter ruin and misery among nations. It is by the excessive creation of Credit that *over-production* is brought about, which causes those terrible catastrophes called Commercial Crises: and the inability of Credit-shops to extinguish the Credit they have created—commonly called the failures of Banks—is the cause of the most terrible social calamities of modern times.

The true limits of Credit may be seen from the etymology of the word. Because all Credit is a *Promise to Pay something in future*. And that "something," whatever it be, is the Value of the promise. That something need not necessarily be money. It is perfectly possible that it should be anything else. The practice of interest, or usury, was in force before the invention of money. It might be a promise to do something. As an example of this, we may take a postage stamp, which is a promise

by the State to carry a letter. And this service is the value of the stamp. Now, it is quite clear, and to shew it, we have only to appeal to every one's experience, that a postage stamp is a valuable thing. It passes currently as small change. Now, people take postage stamps as equivalent to pence, because they often wish to send letters by the post. The recent regulations that stamps shall be convertible into money at any post office, makes them in all respects part of the currency of the country. They are, in fact, 1d. notes.

Now the only real difficulty in the case, is to observe that the naked "Promise to Pay" is independent exchangeable property, quite distinct from the thing itself, and it may circulate, in commerce, just the same as the thing itself. This may surprise some readers at first, but, to shew its truth, they need only appeal to their own daily experience, where they see bank notes, cheques, and bills of exchange, circulating to the extent of hundreds of millions, and performing all the functions of money. We shall see below, that J. B. Say, whose doctrines of credit we shall examine in a future chapter, fully acknowledges that an instrument of credit has an actual value, and may perform the duties of money.

But, of course, it is quite manifest that the VALUE of the promise is the THING *itself*, and, consequently, if the thing itself fails, the promise has lost its *value*. This consideration, therefore, at once indicates the limit of credit. Assuming credit to be, what it is in its best known form in this country, the promise to pay money, it is quite clear that every future payment has a *Present Value*. Consequently, whenever the possession of money at any time is actually certain, the Right to receive it is an exchangeable Property, which may be bought and sold.

Commercial Credit, however, does not rest upon so solid a basis as the *certainty* of being in possession of money, for then it would be as safe as money itself, and losses would be unknown. It is based upon the expectation of receiving money at a certain time. A trader buys goods, and gives his promise to pay money, upon the reasonable expectation that he will be able to sell them for money before the bill becomes due; or, at least, that he will be in the possession of money before that time. That is, he *produces*, or brings and offers them for sale, in the hope that they will be *consumed*, or bought. If he brings forward for sale more of any species of goods than is suitable to

the circumstances of the time, so that they cannot be sold at all; or if they are obliged to be sold at a lower price than they cost, that is *over-production*. He must then pay his bills out of any other funds at his disposal, or sell other property to meet them, and, if he cannot do so, he is ruined.

In times of great speculation and great fluctuations of prices, there is an exceeding danger of over-production by means of Credit, especially by that abuse of it called Accommodation Paper, which we shall describe hereafter. A new channel of trade is opened, perhaps, and the first to take advantage of it, make great profits. Multitudes of others, hearing of these great profits, rush in, all dealing on credit. The market is overstocked, and prices tumble down, and the credit created to carry on these operations cannot be redeemed. Not only are the speculators in many cases ruined, but also frequently the banks which created credit by discounting these bills.

The institution of Banks and Bankers, who create Currency by means of their Credit, either in the form of Notes, or Deposits, gives a great extension to the limits of Credit. But, nevertheless, the *principle* of the limit remains the same. The increased quantity of Currency they can issue by means of their Credit, enables them to lower the rate of discount. These banking Debts take the place of money, and serve the purposes of money for all internal transactions. When a banker has created these Debts by buying commercial Debts, those who are indebted to the banker must obtain a sufficiency of money, or of other bankers' notes, or of the banker's own notes, to discharge their debt. And if this be done, the Credit has been sound; payment in all these forms, as we have seen already, being absolutely equivalent. Hence we see that Credit is never excessive, no matter what its absolute quantity be, so long as it always returns into itself.

On the Extinction *of* Credit.

56. We have now to consider the various methods by which Credit may be extinguished. Commercial Credit in this country is always expressed to be payable in money, but there are various other modes by which it may be extinguished. They are—

I. By Payment in Money.

How a Debt is extinguished by payment in money has given rise to some subtle speculation. It has been alleged by some Theologians that a Right once created cannot be extinguished: and it has been said by some Lawyers, that the Right being transferred to the debtor by the payment of the money, he cannot sue himself, and therefore the Debt is extinguished.

This explanation, however, is not satisfactory, because in many cases a man can sue himself; and, moreover, this would only show that the Right was in abeyance, not that it was extinguished. The considerations, however, we have presented will give a complete solution of the case.

When a man has money, and has also the Duty to Pay a sum, that Duty to Pay is as we have seen a Negative Quantity. The Right to Demand the money in the person of the Creditor is a Positive Quantity. The Debtor then buys this Right to Demand from the Creditor with money; or gives money in exchange for it. By this means the Right to Demand and the Duty to Pay become vested in his own person. And as these are equal and opposite Quantities, they cancel each other, like $+a$ and $-a$ on the same side of an equation. They, therefore, vanish together, and thus the CONTRACT is extinguished. This vesting of the Right to Demand and the Duty to pay in the same person was called *Confusio* in Roman Law.[1]

II. By *Acceptilation*[2] or Release.

When the Creditor transfers his Right to the Debtor as a gift: in this case as before, the Right to demand and the Duty to pay become vested in the same person; they cancel each other, and the contract is extinguished.

A Credit or Right of action being a chattel may be the subject of a Gift, a Sale, or transfer like any other. If presented to the Debtor it is exactly equivalent to the gift of so much money.

Digest, l., 17, 115—Qui obligatione liberatur videtur cepisse quid.

Basil., ii, 3, 115—ὁ ἐλευθερούμενος ἐνοχῆς δοκεῖ τι εἰληφέναι. which may be rendered thus—*The Release from a Debt is increase of Wealth.*

The release from a Debt is always classed as a *Donation* in Roman Law.[3]

[1] *Digest* xlvi., 1 : 71.

[2] *Gaius* iii., 169. *Instit. Just.*, iii., 30-1. *Digest* xlvi., 4.

[3] *Ortolan, Explication Historique des Instituts. Just. Liv. ii., tit.* 7 § 543, 557.

So De Savigny says[1]—"A simple contract, or the Release of a Debt, may be the subject of a donation." So again[2]—"The increase of wealth may result from . . . a credit given to the debtor, or the release of a debt." And again[3]—"The release of a debt always constitutes a gift equal to the amount of the debt, even though the debtor be insolvent."

The release of a debt may be considered to take effect in two ways. Either as the Creditor agreeing to destroy his Right, and then, of course, if the Right is destroyed, the Duty is also destroyed along with it: or else as the gift, or transfer, by the Creditor of his Right to the Debtor; and then the contract is extinguished by the Right and the Duty being vested in the same person. The practical result, of course, is the same whichever way we regard it. But we consider the latter way to be the more philosophical, and more in harmony with the rest of the subject. We shall therefore always consider the release of a debt to be the gift by the Creditor of his Right to the Debtor.

This principle will be found to be of great importance in our modern system of Joint Stock Banking, as will be shewn hereafter.

III. By *Novation*[4] or Renewal, which takes place either when

1. The Obligation is renewed by the same person.

2. Where the Debtor transfers to his Creditor an Obligation due to him from one else. If the new Debtor expressly consented to the transfer it was called a *Delegatio*, or Assignment: and in this case the Assignor was released from his debt to the Assignee, unless it stipulated that he remained bound as a surety.

The modern system of Bank Notes and Cheques is an example of the extinguishment of a Debt by *Novation*. Wherever a Debtor pays his Creditor by means of these instruments of credit, the Creditor agrees to receive the banker as his debtor, and the Assignor is discharged by *Novation*, and the banker becomes *delegatus* to the transferee.

This operation is also known in commerce by the name of "An Exchange," when effected by persons living in different places. A person living in one country may be Debtor to one

[1] *Traité de droit Romain. Liv.* ii., *ch.* 3, § 142. [2] *Ibid.*, § 155.
[3] *Ibid.*, § 166. *See also ante, p.* 470. [4] *Gaius* iii., 176. *Instit. Just.*, iii., 30-3.

person living in another country, and Creditor to another. He may pay his Creditor by sending him an order on his Debtor, and thus the Obligation is extinguished. The mass of reciprocal transactions of this nature which take place between different countries is called the Foreign Exchanges: a subject we shall have to investigate fully hereafter.

This *Novation* was also called *Transfusio.*

IV. By *Compensation*[1] or Set Off.

If two persons were mutually indebted to each other, each might claim that the debt he had to receive should be set off against, or taken as payment of, the debt he had to pay. If the mutual debts, therefore were equal, each was taken as the payment of the other, and the two parties were released by set off. If one debt were greater that the other, a payment in money only of the balance was necessary.

This principle of *Compensation*, or set off, has attained enormous importance in the modern system of Credit, of which we may give as examples.

1. Suppose a banker who issues notes holds a merchant's acceptance. Suppose that the merchant holds an equal amount of the banker's notes. Then the banker has the Right to Demand payment of the acceptance, and he has the Duty to pay his own notes. The merchant has the Right to Demand payment of the notes, and also the Duty to Pay his own acceptance. When the acceptance becomes due the banker demands payment of it from the merchant. At the same time the merchant demands payment of his notes from the banker. The merchant then pays his acceptance by transferring his own notes to the banker. The banker pays his notes by transferring his own acceptance to the merchant. Each of them, then, has vested in his own person the Right to Demand and the Duty to Pay. These opposite Quantities cancel each other, and the two CONTRACTS are thus extinguished.

2. The first great example of this that we are aware of is that mentioned by Boisguillebert.[2] The French merchants finding it very inconvenient always to have to pay their bills in money agreed to make them payable at the fair of Lyons. When this fair took place they met and adjusted their claims against each other by *compensation*, or set off; and by this means says

[1] *Digest* xvi., 2: 1, 2, 3. [2] *Dissertation sur la Nature des Richesses, ch.* ii.

Boisguillebert, a commerce of 80 millions was settled without any money at all.

3. An example of this, on a greater scale, is the Clearing House of London, in which during the last year, Credit to the amount of £5,359,272,000 was adjusted and extinguished by *Compensation* without the payment of any money. There are besides many other Clearing Houses in the country.

Thus we see what a prodigious extension to the System of Credit, the means of extinguishing Credit by other means than payment in money gives. And having now explained how Credit is created, exchanged or sold, and extinguished, we shall now exhibit the mechanism of the great System of Credit.

57. The system of Credit is divided into two great branches, Commercial Credit and Banking Credit. In the first, merchants buy commodities by means of Credit payable at a certain time after date. The second is where bankers buy these Commercial Credits by creating Credits of their own payable on demand. These two departments of Credit are perfectly distinct. Commercial Credit is always created terminable at a fixed time, and is always intended to be extinguished at that time. Banking Credit is always created payable on demand, and must be capable of being paid, if demanded. But it is not *intended* to be extinguished; on the contrary, it is created with the hope and the expectation that it will not be extinguished, but that it will continue in existence and do duty as money. There is no necessity that it ever should be extinguished. It may be transferred from one account to another in the same bank, and from one bank to another to the end of time. It is perfectly possible that much of the Banking Credit which exists at the present day may have been originally created by the very first banks founded in this country; and there is no necessary reason why it should not continue to the end of time. Money is a very expensive machine to purchase and to keep up. But Banking Credits cost nothing to create, and they may be absolutely indestructible.

The two departments of Credit are perfectly distinct, are governed by different principles, and are in some respects antagonistic to each other. The same persons should never carry on both; that is, great bankers should not be merchants,

and great merchants should not be bankers. For the duty of a banker is frequently contrary to the interest of a merchant. By a curious custom, professional bankers are excluded from the Directorate of the Bank of England, which is entirely composed of merchants; and in former times the Directors, who of course sympathized with the commercial community, often pursued a very mistaken policy as bankers, which produced many calamities.

Section IV.

On Commercial Credit.

On Credit based upon Simultaneous Transfers of Commodities—Credit created for the purpose of forming a New Product.

On the System of Credit based upon Simultaneous Transfers of Commodities.

58. Goods or commodities, in the ordinary course of business, pass through the following hands:—1st, the foreign importer; 2ndly, the wholesale dealer; 3rdly, the retail dealer; 4thly, the customer or consumer. To the first three of these persons these goods are *Capital*; because they import, manufacture, or buy them, for the sake of selling them with a profit; the fourth buys them for the sake of use, or enjoyment. The price the ultimate consumer must pay for them, must evidently be sufficient to reimburse the original expense of production, together with the profits of the three succeeding operations.

Now, leaving out of the question at present, how the importer of the goods gains possession of them, which concerns the foreign trade of the country, which we do not touch upon here,—if he sells the goods to the wholesale dealer for ready money, he can, of course, immediately import, or produce, a further supply of goods in the room of those he has disposed of. In a similar way the wholesale dealer sells to the retail dealer, and if he were paid in ready money, he might immediately effect further purchases from the merchant to supply the place of the goods he had sold. So also if the retail dealer were always paid in ready money by his customer, he might replace the part of his stock that was sold; and so if everybody had always ready money at command, the stream of circulation, or production, might go on uninterruptedly, as fast as consumption, or demand, might allow.

This, however, is not the case. Few, or no persons have always ready money at command for what they require. Very few traders can commence with enough ready money to pay for all their purchases; and if the stream of circulation, or production, were to stop until the customer had paid for the goods in money, it would be vastly diminished.

Now, let us suppose that the merchant, having confidence in the character of the wholesale dealer, agrees to sell the goods to him, but not to demand money for them till a certain period afterwards. He accordingly parts with the property of the goods to the wholesale dealer, exactly as if he had been paid in money, and receives in return the RIGHT TO DEMAND payment some time after date. Now the very same circulation of goods has taken place as would have been caused by money. The only difference is, that the actual payment is postponed, and for this the merchant charges a certain price. This debt may be recorded in two ways: it may either be simply recorded in the merchant's books, or else in a Bill of Exchange. But it is quite clear that the property is absolutely the same in whichever form it is, though one form may have more conveniences than the other.

In a similar manner, the wholesale dealer may sell for Credit to the retail dealer, and this Debt may be recorded in two forms, like the first, either as a Book-debt or in a Bill of Exchange. As in the former case, the same circulation, or production, has been caused by Credit, as by money. Lastly, the retail dealer, may sell to his customer on Credit, and this Debt may also be recorded in two forms, either a Book-debt or in a Bill of Exchange. In this latter case the debt is very seldom embodied in a Bill of Exchange, it most frequently rests as a book-debt. But in this case, as well as in the former ones, Credit has had precisely the same effect as money in circulating goods. Hence we see that Credit has had precisely the same effect as money in circulating the goods from the merchant to the consumer. Moreover, we see that the passage of the goods through these various hands has generated a Debt at each transfer. Supposing the merchant sold the goods for a Debt of £100 to the wholesale dealer, the wholesale dealer would probably sell them for a Debt of £140 to the retail dealer, and the retail dealer would sell them to different customers for Debts not less probably in the whole than £200. Hence we see that the successive transfers of the same goods have generated debts to the amount of £440: thereby exemplifying the distinction we have already pointed out between Credit and Bills of Lading; because, if the goods had passed through twenty hands, the same Bill of Lading would always have accompanied them.

Now the Debt for which the merchant sold the goods to the wholesale dealer is no doubt valuable property to him, because he knows it will be paid in time. It may, moreover, be exchanged for anything else, like any other property, if any one will take it. But it is of no immediate use for what the merchant or manufacturer probably wants at the time, namely, money to buy more goods, or to pay wages, &c. Moreover, though he may be quite satisfied as to the safety of the debt, from his knowledge of his customer, it does not follow that others who don't know him will. Consequently such a Debt would not be well adapted for general circulation, and therefore it would be of no use towards further production. In a similar way the Debt for which the wholesale dealer sold the goods to the retail dealer, would not be well adapted for general circulation, and therefore could not conduce further to production. The Debts due by customers to retail dealers, seldom do conduce to further production, because they are most frequently merely in the form of book debts.

Now, the merchant would probably sell to a great number of wholesale dealers whose debts would fall due at different times, and therefore a certain stream of money would always be coming in to enable him to continue production. Similarly the wholesale dealer would sell to a great variety of retail dealers, whose debts would fall due at different periods, and so a certain stream of money would always be coming in to enable him to continue production. Similarly, the retail dealer sells to a great variety of customers, a great many of whom pay him ready money at the time of the purchase, as casual buyers, and his customers too, pay him money, by which he can continue to make purchases and keep up the stream of production. And therefore, this would greatly facilitate circulation, or production.

Credit, so far even as this, would be of great assistance to production, and the vast amount of it generated in this manner would be valuable property to its owners. But it is manifest that it would be of no further immediate use to them. It might therefore be aptly compared to so much dead stock. The next grand improvement would be to make this dead stock negotiable, or exchangeable. The next great step is to make the Debts themselves saleable commodities; to sell them either for ready money, or for other Debts of more convenient amount,

and immediately exchangeable for money on demand, and therefore equivalent to money.

There are two classes of traders whose especial business is to buy these commercial Debts, and so to give activity and circulation to this enormous mass of valuable property, and to convert it from dead stock into further productive power. The first class of these traders are called BILL DISCOUNTERS, *i. e., buyers of debts;* they buy these Debts with money. The second class are called BANKERS; and they buy these commercial Debts, by creating other Debts payable on demand.

Banks, then, as far as regards our present subject, are shops opened for the purpose of buying these commercial Debts. The merchant draws a bill upon the wholesale dealer, who accepts it, and thus becomes the principal debtor on the bill. The merchant then takes the bill for sale, or discount, as it is technically termed, to his banker. It is usual to make bills payable to the drawer, or his order, which is signified by writing his name on the back of the bill. The merchant, therefore, writes his name on the back of the bill, and sells it to the banker, and this operation is termed INDORSING the bill. But the indorsement has another effect besides merely assigning over the debt to the banker, for, unless specially guarded against, it makes him a surety for the payment of the bill, in case the acceptor does not pay it. The effect, therefore, of the indorsement, is a SALE of the Debt, and a warranty of its soundness. But this warranty is not an absolute one, but only a limited one, as has been explained above. The banker, therefore, buys this Debt with a limited warranty of soundness, by creating another Credit, either as in former times, by giving the merchant the amount, less the discount in his own Notes, which some banks are permitted to do now, or else by writing down a similar amount to the credit of his account, which Credit is called a DEPOSIT, and gives the merchant power to draw upon him at pleasure, and at demand. Thus we see that the Banker has bought one Debt, which is valuable property, by creating another Debt, which is also valuable property, and is equivalent to ready money to the merchant. And we must particularly observe that this is not a cancelment of debts, as many suppose, but an *exchange* of valuable property.

The merchant has, however, a great many other similar Debts,

because he has sold to a great many wholesale dealers, and he will probably want to sell these in a similar way to his banker. The merchant will, therefore, indorse each of them over to his banker, thereby making each of the acceptors the principal debtor to the banker, but at the same time becoming himself responsible if any of them fail to pay his debt. If, therefore, the banker discounts the bills of 20 acceptors, he will have 20 principal debtors, who are each of them bound, under the penalty of commercial ruin, to pay their debts when they are due. The merchant, however, is surety for each of them, and as it may happen that out of so many, some may make default, the banker usually stipulates that the merchant shall leave a certain amount of deposit on his account by way of additional security. If any acceptor then make default, the banker immediately debits the account of his customer with the amount, and gives him back the bill. Thus, to a certain extent, the banker always keeps the means of paying himself in his own hands, besides having his customer's name on the bill, which makes his whole estate liable; and, even should his customer fail, he retains the right to have his debt paid out of the estates of both the principal and surety.

The wholesale dealer has given his acceptance for the goods, and he sells them to the retail dealer, and takes his acceptance for them. In a similar manner he wishes to sell this debt to his banker, and so convert it into productive capital. A similar transaction takes place as in the former case. The wholesale dealer sells the debt of the retail dealer, and becomes himself surety for its payment to his banker. The banker also buys this debt by creating another debt payable on demand, which is equivalent to ready money.

The retail dealer may also draw upon his customers, though this is comparatively rare, because customers are generally beyond the pale of commercial law.

By these means we see that the dead stock of commercial Debts is converted into Productive Capital. The merchant and the wholesale dealer, have now the full command of ready money for any purposes they require, and, can continue the stream of production without interruption, and as their bills fall due, all they have to do is to give an order on their banker.

These are the fewest number of hands that goods in the

ordinary course of business pass through, and it is clear that, in their passage from the manufacturer to the customer, they will give rise to at least two bills, and sometimes three. They are all regular business bills, they originate from real transactions, and they are what are called Real, or Value bills, and they are what arise out of the regular and legitimate course of business, and are the great staple of what bankers purchase. It is a very prevalent belief among commercial men, that business bills are essentially safe, because they are based upon real transactions, and always represent property. But the foregoing considerations will dispel at once a considerable amount of the security supposed to reside in commercial bills on that account, because we have seen that in the most legitimate course of business, there will generally be two bills afloat, originating out of the transfers of any given amount of property, so that in the ordinary way there will be at least twice as many bills afloat as there is property to which they refer.

We must refer to the next section, for an exposition of the mechanism of banking, shewing how the creation and exchange of Debts is made in modern commerce to perform the part of money. We will only observe here, that the manufacturer, the wholesale dealer, and the retail dealer, may all be customers of the same bank, and if they all have their bills discounted by it, it will purchase a whole series of debts arising out of the transfers of the same property.

The above operations are only what arise in the ordinary course of business; it may sometimes happen that property may change hands much more frequently, and at every transfer a bill may be created. Hence, when the credits are very long, and the transfers numerous, it is easy to imagine any number of bills being created by repeated transfers of the same property. In times of speculation, this is particularly the case. Now all these bills are technically commercial, or real bills, but it is evidently a delusion to suppose there is any security in them on that account. The fact is, that the whole misconception arises from an error in the meaning of the word "represent." A bill of lading does, as we have said above, *represent* property, and whoever has the bill of lading, actually has so much property. But a Bill of Exchange does not *represent* goods at all. It represents nothing but *Debt*, not even any specific money.

It is created as a substitute for money, to transfer property, but it does not represent it any more than money represents it. This was long ago pointed out by Mr. Thornton, in his *Essay on Paper Credit:*—"In order to justify the supposition that a real bill, as it is called, represents actual property, there ought to be some power in the bill-holder to prevent the property which the bill represents from being turned to other purposes than that of paying the bill in question. No such power exists; neither the man who holds the bill, nor the man who discounted it, has any property in the specific goods for which it was given." This is perfectly manifest. It is both contrary to the law and the nature of Bills that they should be tied down to any specific goods. And it shews that the real security of the bill consists in the general ability of the parties to it to meet their engagements, and not in any specific goods it is supposed to represent, the value of which is vague or illusory, and impossible to be ascertained by any one who holds or discounts it.

The distinction between Bills of Lading and Bills of Exchange is of so subtle a nature, but is of such momentous consequence, that we may illustrate it still further. The preceding sections shew that any given amount of property may, by repeated transfers, give rise to any amount of bills, which are all *bonâ fide*, just for the same reason that every transfer would require a quantity of money equal to the property itself to transfer it. Then, even supposing the price remained the same at each transfer, it would require twenty times £20 to circulate property to the value of £20 twenty times. But also £20 by twenty transfers may circulate property to the value of twenty times £20. So also a Bill of Exchange may represent the transfers of many times the amount of property expressed on the face of it. This is the case whenever the bill is indorsed, or passed away for value; and the bill represents as many additional values expressed on the face of it as there are indorsements. Thus, let us suppose a real transaction between A and B. A draws upon B. That shews the bill has effected *one* transfer of property. A then buys something from C. It is clear that C might draw upon A, in a similar way that A drew upon B. But instead of that, A may transfer the Bill on B, by indorsement. It has now effected *two* transfers of property. In a similar way, C may buy from D, and in payment of the property may indorse over the bill to D. The

bill then represents *three* transfers of property. In a similar way it may pass through an unlimited number of hands, and will denote as many transfers of property. When C indorsed over the bill to D, he merely sold to him the debt which A had previously sold to him. Now that might be done, either by drawing a fresh bill on B, cancelling the first, or simply indorsing over the bill he received from A. Hence we see that every indorsement is equivalent to a fresh drawing. But if he draws a fresh bill on B, it will represent nothing but B.'s debt to him; whereas, if he indorses over the bill he received, it will represent B's debt to A, A's debt to C, and C's debt to D, and, consequently, it will be much more desirable for D to receive a bill which represents the sum of so many previous transactions, and for the payment of which so many parties are bound to the whole extent of their estates. Some fifty years ago, almost the entire circulating medium of Lancashire consisted of Bills of Exchange, and they sometimes had as many as 150 indorsements upon them before they came to maturity. From this also we see that no true estimate can be formed of the effect of the bills of exchange in circulation, by the returns from the Stamp Office, as has sometimes been attempted to be done, as every fresh indorsement is in effect a new bill. So that the useful effect of a Bill of Exchange is indicated by the number of indorsements upon it, supposing that every transfer is accompanied by an indorsement, which is not always the case. We see here the fundamental difference between Bills of Lading and Bills of Exchange, because the indorsements on the former denote the number of transfers of the same property; the indorsements on the latter denote the number of transfers of *different* property. Ten indorsements on a Bill of Lading shew that the same property has been transferred ten times, but ten indorsements on a Bill of Exchange shew that eleven times the amount of property has been transferred once.

We have shewn that the prices of all commodities are universally governed by the Law of Supply and Demand at all times. If the supply be excessive, nothing can prevent the price from falling to any state of depression, until it becomes absolutely unsaleable. The commodity, therefore, will not pay the cost of its production, and unless those concerned in producing it have independent capital to enable them to hold on until

the excessive supply is taken off, and save them from selling when the price is ruinously depressed, or to stand the losses, they will all fail.

Almost all men in commerce are under obligations; that is, they accept Bills of Exchange which must be paid at a fixed time, under the penalty of commercial ruin. To meet these obligations due by them, they have property of two sorts—Debts or Obligations, due to them; and, secondly, commodities. To meet their own obligations, they must sell one or other of these kinds of property. They must either sell their debts to their bankers, or they must sell their commodities in the market. While credit is good—that is, while bankers buy debts freely—they can retain their commodities from the markets, and watch their own opportunity of selling at a favourable moment. As their own obligations fall due, they sell to their bankers some of the debts due to them. Thus, if credit were always good, they might go on for ever without the necessity of ever having a single piece of money paid into their account, or having any money at all beyond what is necessary for their petty daily transactions. But if credit receives a check, and the banker refuses to buy their debts, they must still meet their own obligations, under penalty of ruin. They are consequently obliged to throw their commodities on the market, and sell them at all hazards; the supply of them becomes excessive, and inevitably depresses the price. Traders who have capital enough of their own to meet their engagements without discounting, are able to keep their commodities back from the market, until, the extra supply being exhausted, prices rise again, from the natural operation of the demand. Bankers, we have shewn, always buy the Debts of traders by creating Debts of their own, which are called their "issues," and when bankers refuse to buy the Debts of traders, they are said to "contract their issues." Consequently, a contraction of issues, or of discounts, is generally followed by a fall in prices. And this fall in prices happening coincidentally with a contraction of issues, is frequently supposed to be caused directly by the diminished amount of currency compared to commodities, which is to a great extent erroneous, because it is in reality caused by the extra quantity of commodities, which a refusal to discount Debts causes to be thrown upon the market.

We see, then, how utterly impossible it is to ascertain the precise effect of the contraction of issues of banks upon prices, because the change is principally produced by the quantity of produce which traders are compelled to sell to meet their engagements, when the negotiability of their debts receives a check, and, of course, similar circumstances not only compel traders to sell, but prevent others from buying. Consequently, the supply is greatly increased, and the demand greatly diminished. If, however, the holders of one commodity are possessed of much independent capital, and are not compelled to realize to meet their engagements, a contraction of issues would not affect them much. On the other hand, if the holders of another commodity were in general men who depended chiefly on credit, and were compelled to sell at a sacrifice to meet their engagements, a sudden refusal to discount for them would cause an extraordinary quantity of their produce to be thrown upon the market, and cause a ruinous depression of price.

It is the sudden failure of confidence and extinction of Credit which produces what is called in commercial language a "pressure on the money market," and which causes money to be "tight." When money is said to be scarce, it does not mean that there is a smaller quantity of money actually in existence than before; there may be more, or there may be less in the country; no one can tell what the amount of money in existence is; but a great amount of CREDIT which serves as a substitute, and was an equivalent for money, is either destroyed altogether, or is suddenly struck with paralysis, as it were, and deprived of its negotiable power, and, therefore, practically useless. A vast amount of property is expelled from circulation, and money is suddenly called on to fill the void. When a new field of commercial adventure is found by sagacious discoverers, or a new market is suddenly thrown open by a change in the commercial policy of foreign nations, the first adventurers usually reap enormous profits. As soon as this becomes known, a multitude of other speculators rush into the same field, excited by the profits reaped by the first. Numbers of merchants and traders purchase commodities on credit, that is, they incur obligations which they must discharge at a future day, in the hope that the returns will come in before the day of payment. But the immense quantity of goods poured in usually

gluts the market in a short time, and, from the excess of supply, prices tumble down often to nothing, so that the goods become unsaleable, and either no returns at all come in, or such as are quite inadequate to meet the outlay. When this occurs, it is called *overtrading*, and when this has been extensively practised, it is necessarily and inevitably followed by a great destruction of Credit, and a great demand for *cash*. Thus, credit is destroyed faster than operations can be reduced in proportion. Those traders who have not received the returns they counted upon to meet their engagements, must raise money on any terms, and perhaps sell what property they have, at any sacrifice, to save themselves from ruin. The effect of this will be that money, for which there is an intense demand, will rise greatly in value, that is, discount will rise very high. But as a necessary concomitant of such a state of things, a great quantity of goods will be thrown upon the market, and their price will be enormously depressed. These circumstances will, therefore, produce a very high rate of discount, and ruinously low prices, which must continue until the excessive supply of goods is exhausted and confidence revived. In such cases as these, traders who have not sufficient capital of their own to meet their engagements, and hold on their goods until prices rise, will infallibly be ruined. Under such circumstances, the rate of discount bears no relation whatever to the rate of profit. The use of ready money to persons who have overtraded, is of infinitely more consequence than the price they have to pay for it. It may be well worth their while to pay 15, or 20, or even 50 per cent. for the use of money for a temporary emergency, which may save them from ruin, and enable them to maintain their position.

It is, therefore, not the scarcity of money, but the extinction of confidence, which produces a pressure on the money market; and an examination of all the great commercial crises in this country, will show that they have always been preceded and produced by a destruction of this Credit, which has usually been brought about by extravagant overtrading and wild speculation.

The principle that the relation between supply and demand is the sole regulator of value, combined with the action of the credit system, will explain all the phenomena witnessed during a pressure on the money market. The failure of credit in any one branch of business will produce its full effect on the general

market rate of interest, because that is regulated by the intensity of the demand for money from whatever quarter it comes; but it will not necessarily follow that the market prices of all commodities will be depressed. The market price for each commodity will be governed entirely by its own peculiar circumstances. If the holders of one commodity have independent capital, and have prudently abstained from overtrading, the price of such a commodity will not suffer much, because the ratio of supply and demand will not be altered to any great extent, but it cannot help sympathising to a certain extent with other commodities. But if the holders of another species of commodity have overtraded, and depended too much on credit, without sufficient means, they will necessarily be obliged to throw a great quantity of their produce on the market to realize, and this excessive supply will depress the price. And this effect will be increased because such are the very times when persons who have ready money are particularly cautious in buying, partly because they always hope the market will fall still lower, and they hope to buy cheaper when prices have fallen to a minimum, and they will certainly not buy more of any commodity than they can help, which is diminishing in value; and partly because they must keep their ready money to maintain their own position. From these causes, not only is the supply increased, but the demand is diminished, so that the fall is doubly aggravated. Thus, we see at once, that a falling market will always be well supplied, because people who must sell, hasten to do so before the price falls still lower; and buyers hold aloof, waiting as long as they can, to see the lowest. On the other hand, when markets are rising, the case is reversed. The sellers hold aloof, hoping the price will be still higher, and buyers crowd in, hastening to purchase before the price rises more. A market that is desponding and inactive will usually continue so until people are persuaded that things are at the lowest, and are at the turn. It is evident that these considerations and observations apply to home produce, or at least to produce which is already in this country, and which can be thrown on the market immediately. In order to attract foreign produce, the market must rise high for a considerable time, with the appearance of continuing so.

Considering that any bill whatever which is drawn against

bonâ fide produce is in commerce technically a real bill, it will be seen at once that their supposed security is greatly exaggerated, because any operation, however foolish and absurd, is a good basis for a real bill. In times of rapid changes in price, multitudes of bills will be generated by speculative purchasers, and when the price falls as rapidly as it rose, as it usually does, it is simply *occupat extremum scabies*. Hence, losses, and very severe ones, too, are sure to happen in such times. But there is always at least this certainty with real bills. When persons have speculated unluckily and lost their fortunes, they are brought to a standstill. When a man has ruined himself by speculation, no banker out of Bedlam would advance him more money to speculate with. Hence, ill-judged speculation must stop a man's mischievous career in a comparatively short space of time, that is, whenever he has lost the value of the goods he has been speculating with. We shall find in the next section, unfortunately, that traders have devised a method to extract funds from bankers to speculate with, by which they can go on long after they have lost all they ever had, many times over, and adding loss to loss, until, perhaps, they may bring down their bankers, whom they duped and defrauded, as well as themselves. We have shewn, in the next section, that there are symptoms which will often indicate a commercial crisis.

On Credit created for the purpose of being applied to the Formation of a New Product.

59. The operations on Credit, which we have hitherto been considering, were all based on an anterior operation, or one in which an exchange of commodities was effected by the creation and sale of the Credit, which Credit was afterwards sold or exchanged for another Credit. Such Credit is, therefore, manifestly limited by operations which have been made, and by commercial exchanges. The number of bills created could by no possibility exceed the number of transfers of commodities, although they might be greatly less, because, as we have seen, a single bill might be used to effect many transfers of property. In all these cases, a Debt has been created, which was expected to be paid out of the proceeds of the sale of existing property.

But since Credit is, as we have shown, exchangeable property, and a substitute for money, it is clear that it may be applied as well as money to bring new products into existence. The limits of it in this case will be exactly the same as those in the former case, namely, the power of the proceeds of the work to redeem the Credit.

As an example of such a creation or formation of a product, we may take such a case as the following:—Suppose the corporation of a town wishes to build a market-hall, but has not the ready cash to buy the materials, and pay the builder's and workmen's wages. It may be a matter of certainty, that if the market were once built, the stalls in it would be taken up immediately, and the rents received from them would liquidate the debt incurred in erecting it. But, as the workmen cannot wait until that period, but require immediate cash to purchase necessaries, it is clear that, unless there is some method of providing ready payment, they cannot be employed. In such a case, they might borrow money upon their own bonds, repayable at a future period. Now here we observe that these bonds are the creation of property. They are the right to demand a future payment, and are valuable exchangeable property, which may be bought and sold like any thing else. In this case we observe there is an exchange. But the corporation need not borrow money. They might make their own obligations payable at a future date. And if these were made small enough, and were readily received by the dealers in the town, they might be used in the payment of the workmen's wages, and perform all the functions of a currency, and be equivalent to money. Each of them is a new RIGHT *created*, and valuable property which is exchangeable, and, therefore WEALTH by the definition. They would be quite as efficacious in *producing*, or forming, the market-hall as real capital. And the market-hall itself would be capital, because it produces a profit. As the stalls were let, and rent received for them, the bonds might be redeemed, and the debt cleared off. It is said that many market-places have been built by adopting such a plan. This case shews the utter futility of the notion that Credit cannot be applied to the formation of products, and here we see it was not based on any anterior operation.

This is an instance of the *creation* of a product by credit, and not merely the transfer of an existing product. The result to

the corporation would be precisely the same, whether they accomplished their object by borrowing real capital and paying interest for it, or by issuing bonds, bearing interest, payable at fixed periods. In the one case, they would be liable to the full extent of their property to the persons from whom they had borrowed on the money; in the other, to those who held their bonds. If the operation was successful, its profits would in the first case pay the persons who had lent the money; in the second, the profits would pay the persons who held the notes, and extinguish the liability of the corporation. If the operation were unsuccessful, the corporation would equally have to make good the loss out of their general effects, either to the lenders of the money, or to the holders of the notes. It would, therefore, be a matter of no consequence whatever to the corporation which way they adopted to accomplish the work; but it would be a matter of importance to the town at large, because, if they borrowed real capital to do it, that would by so much diminish the fund of moving power applicable to other species of industry, and raise its price. It is clear, therefore, that the second method would be so much clear addition to the capital of the community, and would therefore be most advantageous for them.

This second method of utilizing credit, from not being based upon *real* capital, is an instance of what is usually called *fictitious* capital, a name of extreme inaccuracy, which too many persons are in the habit of using, from the hasty assumption that what is not real must necessarily be fictitious, and are more led away by a jingling antithesis of words than an accurate perception of ideas. If the bonds issued by the corporation were not redeemable, and represented nothing, the epithet *fictitious* would be accurate. But such is far from being the case. In both cases it resolves itself into the PRESENT VALUE *of a deferred payment.* In the first instance, the obligation incurred by the corporation to the lenders of the money would not be limited to the specific capital they advanced, but would be a general charge on the whole property of the corporation. The bonds issued in the second case would be precisely the same; they would confer upon the holders of them a general charge upon all the property of the corporation. The security to the holders of the corporation's obligations would be absolutely identical in either case. If the corporation spend the money, it is absolutely gone away

from them for ever, and is no more a security to the holders of their notes than if it had never existed. In either case, then, it is the permanent property of the corporation which is the real security of the holders of its notes; and they have the same general charge over it in both cases. It is, therefore, to the last degree inaccurate and untrue to distinguish one case by the term real capital, and to brand the other as fictitious. There is absolutely no distinction at all between the two cases, as far as regards the corporation and the holders of its obligations; the profits and the losses are identical in their effects in either case. The true difference is to the community at large, and the general fund of capital available for its use, and its only effect is to make capital somewhat cheaper than it would otherwise be; and a judicious and successful employment of it eminently conduces to the national prosperity.

The only advantage of the second method is that it makes capital more abundant, and sometimes might provide it when not otherwise obtainable. If it were scarce, or otherwise occupied, it might not always be possible to obtain it. If nobody had money to lend, the second method might supply the want, and so long as it is practised by judicious persons, and used in promoting successful operations, it is a great blessing. But it is just on this very point that it is liable to the most dangerous abuse. If the corporation were limited to the use of real capital advanced by some independent person, he would probably take into consideration the purpose to which it was to be applied, as well as the solvency of the corporation, and if he thought it injudicious, he would probably not advance it. There would therefore, be so far a check upon them; but if they were totally destitute of control, and could embark in any operation, by simply writing a few "promises to pay" upon bits of paper, they may be led away into wild and dangerous speculations, deceived by false expectations of profit, and involve themselves and all who trust them in ruinous losses. Because, though these promises to pay did not represent real advances, and are therefore inaccurately called fictitious capital, if they get into circulation, and people give value for them in commodities or services, a disastrous operation based upon them is just as much loss of capital as if they had been real advances.

We have thus shewn that in the production of commodities,

which term must be held by the unanimous consent of all modern Economists to include both the formation and the transfer of commodities, Credit performs exactly the same function as money; so far, therefore, as production goes, Credit is in all respects equivalent to money. And so long as the operations are successful, everything goes well: money being, as we have laid down, the representative of the fruits of a man's past industry, and Credit a pledge of his future industry. It is certain that "Credit" exceeds "money" many times in this country, for whereas it is not supposed that the actual money exceeds £80,000,000, the Credit in Bills of Exchange, and which is only one form of it, taking a very low estimate, exceeds £400,000,000; that is, the people of this country have always pledged their future industry to the extent of four hundred millions. And this £400,000,000 is equally capital, it is equally a real value as the £80,000,000. No doubt it is of a different description; it is more perilous; a portion of it may perish. But it is an undeniable fact that it has performed the same functions, so far as regards production, as money. It is a distinct and separate value over and above commodities, totally different from Bills of Lading, which merely represent particular commodities. Bills of Exchange are not a lien upon property, but upon industry, and any property a man possesses is only a kind of collateral security to make good his engagements in case his industry is unsuccessful.

In the case we examined of a bank discounting the bill of the manufacturer A, upon the dealer B, the transaction was already effected upon which it was founded. A had rendered the service to B, for which he was to be paid at a future day, *before* he drew the bill upon him, and originally all bills of exchange represented previously existing debts, and they bore on the face of them the words "for value received" to testify the fact. Consequently when A discounts the bill, founded upon that transaction, with the bank, it must be carefully observed that he is simply selling a Debt which is his existing property. And so long as Bills of Exchange are restricted to representing past transactions, their negotiation is not borrowing money, as is commonly understood. But the sharpness of traders discovered that they might be applied to future transactions.

In the case of a *past* transaction, the bill was given by B, who

had got the goods, to A, who had given them, and A had got the money that would be payable to him at the maturity of the bill, advanced to him by the bank on the credit of B's reputation, as well as his own. If B, however, be a person of wealth and reputation, he may lend the use of his name to A without any real transaction having taken place between them. Thus, he may accept a bill of A's, and A, on the strength of his name, goes to his banker, and gets the money, with which he performs some operation, such as manufacturing goods, and, having done so, he may sell them to C, and take C's bill in payment of them, which latter is a real transaction. Now the whole of this operation is based upon the credit of B's name, it is not based upon anything real, or upon any service previously rendered; consequently it is in itself a completely new transaction. Such a bill between A and B is called an ACCOMMODATION BILL. This name is, however, not confined to cases where the acceptor lends his name for the accommodation of the drawer, though that is the most usual form, but wherever an acceptor, drawer, or indorser puts his name upon the bill, and therefore renders himself liable to a holder for value to discharge it, without, as the legal expression is, consideration moving to him, it is an accomodation bill, and the party for whose accommodation it is negotiated is bound by law to provide funds to discharge it at maturity, and also to indemnify the accommodation acceptor, drawer, or indorser, as the case may be, against the consequences of non-payment.

The practical effect of this transaction is simply that B stands security to the bank for the money advanced to A; and there is nothing in the nature of such a transaction worse than for one man to stand security for another in any other commercial transaction. In some respects it is much fairer to the person who runs the risk as security, because, in the ordinary course, when one person becomes security for another, he does not receive any pecuniary recompense for the risk he runs, to which he was certainly most fairly entitled; whereas, if it be done by way of Accommodation Bill, he generally receives some *quid pro quo*, and when a bank performs an operation of exactly the same nature, it always receives a high interest for the risk it runs, and, when judiciously done, is a very profitable source of income. From the extravagant abuse, however, of such methods of

raising capital, Accommodation Bills have acquired a most discreditable reputation, and there is nothing which requires more vigilance in a bank than to guard against being intrapped into making unwary purchases of such securities.

A great deal has been said and written about the difference between real and accommodation bills, and while no terms of admiration are too strong for the first, no terms of vituperation are too severe for the latter. Thus, Mr. Bell says:—"The difference between a genuine commercial bill and an accommodation one, is something similar to the difference between a genuine coin and a counterfeit," as if the act of negotiating an accommodation bill were in itself one of moral turpitude. It is, also generally assumed that real bills possess some sort of additional security, because it is supposed that there is property to represent them. We have already seen, however, the entire delusion of such an idea, and that it is a great mistake to suppose that commercial bills have any specific relation to the property from the transfer of which they originally sprung. In truth, both real and accommodation bills have precisely the same security—they constitute a general charge upon the whole estates of all the obligants upon them. The objections to accommodation bills, therefore, on that ground are perfectly futile.

The essential distinction between real and accommodation bills is, that one represents a *past*, and the other a *future*, transaction. But even this is no ground for any preference of one over the other. A transaction which *has been* done may be just as wild, foolish, and absurd as the one that *has to be* done. The intention of engaging in any mercantile transaction is, that the result of it should repay all the outlay, with profit. There is no other test but this of its propriety, in a mercantile sense. Such things have been heard of in the mercantile world, as consignments of skates to tropical countries. Now, a bill drawn against such a shipment as this would pass muster, in technical language, as a *real* bill, while one drawn to forward some other operation, however sound and judicious it might be, if it were not yet accomplished, would be an accommodation bill, and be branded as fictitious. Mr. Bell would call the former genuine coin, the latter counterfeit.

We see, therefore, that the common objections urged against accommodation bills are perfectly futile, and quite wide of the

mark. Whether a bill be a good and safe bill, has no reference to whether it represents a *past* or a *future* transaction, but whether it is a safe and judicious one itself, and the parties to it respectable and of sufficient means to meet their liabilities. The whole Cash Credit system of Scotland, which has conduced so eminently to the prosperity of that country, is a system of accommodation paper, which is sufficient to disprove, in the mind of any dispassionate person, that the system is in itself necessarily dangerous and pernicious, but is proof enough that, if it is judiciously managed, it may be of great advantage.

The true objection to accommodation paper is of a different nature. When the credit system is carried on duly and properly, and within legitimate limits, it is the most ingenious method ever devised for promoting commerce, and where it has been cautiously used, has marvellously succeeded in so doing. But it is a very trite remark, that the best things when corrupted become the worst. This is eminently true of Paper Credit. Universal experience proves that there is nothing so dangerous and pernicious as for individuals to have an undue facility for obtaining credit. When capital is to be had on too easy terms, it fosters, to an extravagant extent, the fatal propensity for embarking in all sorts of wild speculations, and pushing trade far beyond the possibility of being remunerative.

The considerations we presented shewed the exaggerated ideas of the security of real bills. But there is at least this security in real bills, that as they only arise out of real transfers of property, their number must be limited, in the very nature of things. However bad or worthless they may be individually, they cannot be multiplied beyond a certain extent. There is therefore, a limit to the calamities they cause. But with accommodation paper there is no limit. A beggar may write upon bits of paper a million of "promises to pay" as easily as a Rothschild; and it is far more probable that he will do so; a man without a farthing is proverbially the most reckless, because when the bubble bursts, it is a matter of no consequence to him, he has nothing to lose, the misery and the ruin fall upon his unfortunate dupes. A man of real capital will be cautious in his operations. A loss to him will be real, but a man who is not worth a sixpence is indifferent whether he loses a £1,000 or a £1,000,000.

This system of Accommodation Paper of different descriptions, is one of immense importance in modern commerce, and its abuse has led to some of the most terrible mercantile catastrophes on record. It is, however, so intimately interwoven with banking, that we shall defer any more mention of it till the next section, which treats of the operations of Banking.

We have observed that so far as regards production, which, in a scientific sense, includes the formation and transfer of products, Credit, whenever it is applied, performs exactly the same function as money. As in this section we wish to avoid all controversy, and merely to state facts, we will only say that all commercial transactions on credit are SALES. The absolute property of the article passes from the vendor to the purchaser, just exactly as if the price had been paid in money. The only difference to the purchaser is, that his profits are less, because the credit price is higher than the money price. So long as matters proceed smoothly, and transactions are profitable, the bills generated by commerce are equivalent to so much money. The difference arises when the sales are unprofitable, and losses ensue. If the wholesale dealer buys from the manufacturer for ready money, and the speculation is unfortunate, the whole loss falls upon the dealer, the manufacturer does not lose; he has got his money. But if the speculation is unfortunate, and a loss ensues, or if the wholesale dealer fails from other reasons, the loss may fall upon him. When he has sold on credit to the dealer, his power over the goods is absolutely gone; and if the bill is unpaid he cannot reclaim the goods, even if they are still in the possession of the purchaser, he has no more claim to them than any other creditor. Consequently, if the dealer has not sufficient funds to pay his debts, the loss falls upon the original manufacturer. In this, then, consists the whole difference between sales on credit and sales for money, that if losses ensue, they may be differently distributed. No doubt the manufacturer finds that a bill of exchange is not so negotiable as a bank note or money, but it is of the same nature, and must be placed in the same category. The money is nothing but a bill on the whole community. Good bills of exchange do, to a certain extent, circulate in commerce like money; but the manufacturer generally finds it more convenient to sell the bill to his banker, and how the banker buys it will be explained in the next section.

Now, we have shewn[1] that capital, in its most general sense, is not any particular thing, but simply an Economic Quantity, be it currency or anything else, employed in reproductive operations. In its general sense, it is the purchasing power of the merchant, or it is the moving power at his command to generate a circulation of commodities, out of which he reaps his profits; it is the power which draws the goods out of the possession of the manufacturer into the possession of the dealer, for him to make a profit. The money he has is the fruit of the services he has formerly done to the community. Credit is also the power he has of drawing the goods from the possession of the manufacturer, and is the pledge of his skill in rendering future services to the community, by discerning their wants and supplying them. The effect upon the markets and upon the prices is exactly the same, whether purchases, *i. e.*, circulation of commodities, be generated by credit or real capital, and the profits and losses are exactly the same to the community, whether the operation be effected by credit, or by real capital. Hence, we arrive at this conclusion, that MERCANTILE CREDIT IS MERCANTILE CAPITAL.

It has frequently been observed that all great inventions have an equalizing tendency; the invention of gunpowder equalized the condition of the poorest foot soldier and the wealthiest knight, and it destroyed the supremacy of the knights; the invention of printing opened up the paths of knowledge to the poorest as well as to the rich, and destroyed the supremacy of wealth in the acquisition of science; the invention of steam and railroads has equalized the means of locomotion to the humble and the wealthy; so the invention of Credit has destroyed the supremacy of capital or money, and has provided the means for the most humble to place his foot on the first step of the ladder of opulence. It is a matter of common observation that nothing is so difficult as the first step to wealth; that many men could get on if they had only a beginning. Now, credit supplies the means of attaining that first step to all. Credit is a mighty power, and no doubt like other great engines, is liable to be abused; but it is entitled to take rank with gunpowder, printing, and steam, among the marvels of human ingenuity, and it has been the chief cause of the magnitude of modern commerce.

[1] *Chap.* iv., *s.* 27.

Section V.

The Theory of Banking.

Invention of Banking by the Romans—On the Meaning of the word Bank—Definition of a Banker—On the Mechanism of Banking—On Cash Credits—Open Credits—On Accommodation Bills—On the Conversion of Temporary Credit into Permanent Capital—On the Clearing House—Banking augments Capital.

60. The business which is technically called Banking, seems, as far as we can ascertain, to have been invented by the Romans. It is true that there were abundance of money dealers and money lenders at Athens, and other places, but their business seems, as far as we can discover, to have been more analogous to that of those persons we call *money scriveners* and *bill discounters*, than of those whom we call bankers. For the business of banking consists in creating credits in favour of the persons who deposit money with the banker, and in paying debts by transferring credits from one account to another, as well as by making all advances in the first instance by creating a credit. This mode of doing business essentially distinguishes a banker from a *money scrivener*, or *bill discounter*, who actually advances the money itself. This seems to have been the business of the Athenian τραπέζιται, and, if so—though we speak on the subject with great doubt, in the absence of information—they were technically bill discounters, and not bankers.

The Romans, on the contrary, practised the business, which is technically called banking, nor do we know when it was invented. The earliest notice we have of these banks, or *argentariæ*, is in Livy ix., 40, B.C. 308, where they are spoken of as being already placed in the Forum, where they always continued. But he gives no account of the method in which the bankers transacted their business. The comedies of Plautus (B.C. 224—184) contain several allusions to bankers and their business. He calls them *trapezitæ*, *argentarii* and *danistæ*.

Though we cannot tell the exact period when banking was first invented at Rome, we can point out how it arose. We have

seen that in the early ages the borrowing of money was a very solemn affair. It was effected by means of the sale *per æs et libram*, and the solemn form of words, which created the *jus*, or legal bond, the *nexus*. In process of time however, the formality of the weight and scales was dispensed with; it was taken as performed, and the obligation was created by the form of words;[1] this was called *obligatio verbis*.

In process of time the art of writing became gradually general among the Romans, and then a very strict custom grew up. Every *dominus*, or head of a family kept a family Ledger, in which every incident of his life was daily recorded; his revenues and profits, his outgoings, losses and expenses of every sort.[2] It seems that every occurrence was first noted down in *adversaria*, note books, or waste books, and then formally recorded at the end of the month, in the family Ledger, called the *Tabulæ*, or *Codex*. When these Ledgers were formally completed, they were intended to be preserved as heirlooms in the family, and were almost invested with a kind of sanctity, and they were legal evidence.

A great difference was made between the *adversaria*, or waste book, and the *codex*, or Ledger. This distinction is strongly insisted on by Cicero[3]—"He confesses that he has not this entry in his Ledger (*codex*) of payments and receipts, but he insists that it is found in his note book (*adversaria*). Are you then so fond of yourself, and have such a magnificent notion of yourself as to sue for money not on the evidence of your Ledger, but of your note book? It is arrogant to bring forward your Ledger instead of witnesses; but is it not simple madness to produce your own scraps of writing and notes? If these notes have the same force, and weight, and authority as the Ledger, what use is it to make a formal Register? to make entries in it? to keep it in regular order? to make a permanent record of old writings? But if, because we put no trust in notes, we have an established custom to make a Ledger; is that which we ourselves consider weak and unreliable, to be considered of weight and approved of before a judge? Why is it that we write notes without much care, and we write the Ledger with great care? For what reason? because the one is to last only a month, the other

[1] *Ortolan, explication historique des Instituts*, § 1192.
[2] *Ortolan, Ibid.*, § 1416. [3] *Pro Roscio Comœdo.* § 2.

for ever: the former are soon erased, the others are preserved with religious care: the former preserve the memory for a short time, the latter pledge the good faith and honesty of a man for ever. Notes are thrown away, the Register is kept in order. Therefore nobody produces notes as evidence in a cause; but they do produce the Ledger and read the entries."

When the bankers commenced their business, the books they kept were simply those kept as a family record by every Roman citizen. The entries in these books did not constitute the contract; what made the contract was the loan of the money:[1] the entries were only the *evidence* of the debt: and therefore they were Instruments of Credit. They were exactly similar to our bankers' books at the present day. Most bankers now create Credit by means of entries in their books, which are called "Deposits." The transcript of this given to the customer with the relations of Debtor and Creditor reversed, called the Pass book, exactly correspond to the *Codex accepti et expensi*, and are legal evidence of the debt, and therefore Instruments of Credit.

The entry of the person's name in the *Codex*, or *Tabulæ*, either for money paid or received, was termed *Nomen*: hence *nomen* became the common word for a debt, or an obligation. *Nomina sua exigere*, is to get in one's debts; *nomen locare*, is to borrow money; *nomen facere*, to lend money: the entries in the *Codex* were called *arcaria nomina*, because the money was weighed out of the *arca*, the safe, or chest.

61. But if the parties agreed that the entries should be made, then a Contract was constituted. He who lent the money, made an entry of money weighed out and given, (*pecunia expensa lata*), and the other made an entry of money received (*pecunia accepta relata*); and thus was constituted the *Obligatio litteris*. Hence arose the legal technical terms, *expensum ferre*, to lend money; *acceptum referre*, to borrow money; *pecunia expensa lata*, money lent; *pecunia accepta relata*, money borrowed: and the Ledger, or Cash book, was called *Codex accepti et expensi*, and *nomen facere*, was to create this kind of obligation.

We have seen that Gaius says that a debt might be transferred by the consent of the Creditor, the Debtor, and Assignee. When Debts were transferred in this manner they were called

[1] *Gaius, Instit.* iii., 131.

nomina transcriptitia. If the person had contracted an obligation by the loan of the money, it was called *obligatio re:* but if the parties agreed, a contract by entry in the Codex might be substituted, and *â re in personam transcriptio fit*, a transfer from the thing to the person: when the account was transferred from one person to another, it was said *â persona in personam transciptio fit.*

In the case of bankers, the actual meeting of the Creditor the Assignee and the Banker was not necessary; the customer might give a cheque on his account. This was called *attributio* or *perscriptio. Scribere* was to give credit in the books: *rescribere* or *prescribere* was to transfer a credit from one account to another.

Thus in Plautus, *Asinaria*, ii, 4, 34, Leonida says:—

"Abducit domum ultro, et scribit numos." *Of his own accord he brings him home and places the money to his account.*

Acceptum ferre was to credit a customer's account with money received; *expensum ferre* to debit it with money paid.

Thus in the *Mostellaria*, i., 3, 146:—

"Ratio accepti et expensi inter nos convenit."

The accounts between us balance.

Terence says, *Phormio*, v. 7, 29:—

"Sed transi, sodes, ad forum, atque illud mihi
Argentum rursum jube rescribi, Phormio.

PHORM. Quodne ego perscripsi porro illis, quibus debui?"

"*But Phormio, be good enough to go over to the forum, and order that money to be put to my account.*"

PHORM. *What! that for which I have already given cheques to my creditors?*"

So Cicero says[1]:—"Qui de c c c c, Hs c c presentia solverimus, reliqua rescribamus."

"*Of the remaining four hundred sestertia, I have paid two hundred in cash, and I shall send a cheque for the rest.*"

We have no information whether the cheque, the *attributio* or *perscriptio*, was capable of being transferred to any one else by the person who received it, or whether it was only payable to himself.

In process of time these family Ledgers fell into disuse, because persons did not choose to make a record of all their

[1] *Epist. ad Atticum*, xvi., 2.

actions, and so furnish evidence against themselves. The last persons who kept them up were the bankers. But though this usage was abolished, the word *nomen* was retained for a debt, or obligation.

Gaius says[1] that the use of written obligations was peculiar to foreigners; by this we surmise he must mean that they were only legal evidence in the case of foreigners, and not in the case of Roman citizens. That they were in actual use by the Romans is clear, because they are mentioned by Plautus, Cicero, Suetonius, and Seneca. In process of time, however, they came into general use, and were called *Chirographa*, or more generally *Cautiones:* and then they became the usual form of obligation, as Promissory Notes are with us.

On the meaning of the word Bank.

62. We shall find that it is indispensable to a clear understanding of the subject we are going to consider, to ascertain the true meaning of the words Bank and Banker.

It is popularly supposed[2] that the word Bank comes from the Italian word *banco*, a bench, or table, because the money dealers or money changers, kept their money piled on benches or tables, whence it is said they were called *banchieri*. It is also said that when they failed, their bench was broken up (*banco rotto*), hence our bankrupt.

Nevertheless, there can be no possible doubt but that this derivation is a pure delusion: for the money changers, as such, were never called *banchieri* in the Middle Ages.

We shall now shew what the real meaning of Bank is, not only in Italian, but as it was understood in English, when it was first used, as applied to money dealing.

Muratori after noticing the absurd derivation of *banco* from *abacus* says[3] — "To me on the contrary the word seems to have come from the German *Banck*, which is a very ancient word in that language, as John Schilter notices."

So also says Ducange[4] — "Bank is therefore of Franco-German or Saxon origin; no other is to be sought for."

There is no doubt whatever that these learned authors are

[1] *Instit.* iii., 134. [2] *Gilbart's Practical Treatise on Banking. Vol.* 1, *p.* 1.
[3] *Antiq. Ital: Med. Æv. Vol. II. p.* 1148. [4] *Med. et Infim. Lat. Lex. S. V. Bancus.*

perfectly correct. The true original meaning of Banco is a heap, or mound, and this word was metaphorically applied to signify a common fund, or joint stock, formed by the contributions of a multitude of persons, and we will now explain how it arose.

The Roman state made it a cardinal maxim of their policy never to carry on more than one war at once. The City of Venice in 1171, carried on a simultaneous war with the Eastern and the Western Empires. The Republican finances were, as might naturally be expected, in a state of great disorder, and the Great Council decided upon raising a forced loan. Every citizen was obliged to contribute the hundredth part of his possessions to the necessities of the state, upon payment of interest at the rate of 5 per cent. The public revenues were mortgaged for the payment of the interest, and Commissioners were appointed, called the *Camera degli Imprestiti*, for managing the payment of the interest to the fundholders, and transferring the stock. Such a loan has several names in Italian, such as *Compera*, *Mutuo*, but the most common is *Monte*, a joint stock fund. This loan in 1173, was called the Monte vecchio; and in course of time several other loans were contracted, two of which were called the *Monte nuovo* and the *Monte nuovissimo*. In exchange for the sums contributed by the citizens, the Commissioners gave them stock certificates bearing interest, which they might sell or transfer to any one else, and the Commissioners kept an office for the transfer of the stock and the payment of the dividends.

At this period the Germans were masters of a great part of Italy, and the German word BANCK came to be used, as well as its Italian equivalent Monte, and was Italianised into *Banco*, and the loans or public debts were called indifferently Monti or Banchi.

Thus an English writer Benbrigge, whom we shall quote further on, in 1646, speaks of the "three Bankes" at Venice, meaning the three public loans or Monti.

So a recent eminent Italian writer Count Cibrario says[1]— "Regarding the theory of Credit, which I have said was invented by the Italian cities, it is known that the first BANK, or *Public Debt*, was erected at Venice in 1171. In the 13th century paper money is mentioned at Milan: the credit was paid off. A MONTE, or *Public Debt* was established in Florence in 1336.

[1] *Della Economica Politica del medio evo*, p. 530.

"At Genoa during the wars of the 14th century, the Bank of St. George was established, formed of the creditors of the State."

So in Florio and Torriano's Italian Dictionary, 1659, it says—"MONTE—a standing Bank, or Mount, of money, as they have in divers cities of Italy, namely in Rome or Genoa."

We have said enough, we think to shew that *Banco* in Italian means a fund formed by several contributions; and the Bank of Venice was in reality the origin of the Funding System, or the system of Public Debts, it did not for many centuries do any of what we call banking business.

63. The meaning of the word BANK was the same in English when it was first introduced—

Thus Bacon says[1]—"Let it be no *Bank*, or common stock, but every man be master of his own money."

Gerard Malynes speaks[2] of "Mons Pietatis or Bank of Charity"; and says—"In Italy there are Montes Pietatis, that is to say *Mounts* or *Banks* of Charity."

So Benbrigge in his *Usura accommodata*, published in 1646 says—"For their rescue may be collected MONS *Pietatis sive Charitatis* or BANKE *of Piety or Charity*, as they of Trent fitly call it." Again—"For borrowers in trade for their supply, as their occasion shall require, may be erected MONS *Negotiationis* or BANKE *of Trade*." He also quotes from Tolet, another writer, who speaks of two kinds of banks, namely "MONS *fidei*, or BANKE *of Trust*, which Clement XII. instituted at Rome—he that put his money into this *Banke* was never to take it out again," for which the investor received 7 per cent. interest, like the original Bank of England stock. He also speaks of Mons Recuperationis, or BANKE *of Recovery*, of which the interest was 12 per cent. The difference between these two was that between perpetual and terminable annuities, where the higher interest of the latter is, in fact, repayment of the capital by instalments.

In the time of Cromwell, some proposals were made for erecting public Banks. Samuel Lambe, a London merchant, in 1658, recommending them says—"A Bank is a certain number of sufficient men of estates and credit, joined *together in Joint Stock*, being as it were the general cash keepers, or treasurers

[1] *Essay on Usury.* [2] *Lex Mercatoria, Part ii., ch.* 13.

of that place where they are settled, letting out *imaginary money* (*i. e., Credit*) at interest at £2½ or £3 per cent. to tradesmen, or others that agree with them for the same, and making payment thereof by assignation, and passing each man's account from one to another, with much facility and ease."

So also in a little tract entitled "A discourse concerning Banks," 1697, and supposed to be by a Director of the Bank of England, it says there are three kinds of Banks, the first for the mere deposit of money, the second for profit— "The Banks of the second kind, called in Italy *Monti*, which are for the benefit of the income only, are the Banks of Rome, Bolonia, and Milan. These Banks were made up of a number of persons who, in time of war, or other exigences of state, advanced sums of money upon funds granted *in perpetuum*, but redeemable."— "The third kind of Banks which are both for the convenience of the public, and the advantage of the undertakers, are the several Banks of Naples, the Bank of St. George at Genoa, and one of the Banks of Bolonia. These Banks having advanced sums of money at their establishment, did not only agree, for a fund of perpetual interest, but were allowed the privilege of keeping cash." The Bank of England was of this last sort.

So also Evelyn[1] speaks of the "Monte di Pietà at Padua, where there is a continual Bank of money to assist the poor."

So also Blackstone says[2]—"At Florence in 1344, Government owed £60,000, and being unable to pay it, formed the principal into an aggregate sum, called metaphorically, a *Mount*, or *Bank*."

There has only been one instance in this country of a Bank which did not receive deposits in cash. Soon after the Bank of England was founded, a company of persons united to advance a million to Government, and they were incorporated as the "Million Bank." This company existed till nearly the end of the last century, and it resembled the original Bank of Venice.

Now the essential feature of all these "Banks" was this, that a number of persons placed their money in them, and received CREDIT, or a *Promise to pay* in exchange: and the very essence of "banking" is to receive money and give in exchange for it an Obligation, or Credit, or Debt.

The Bank of England was formed in a similar manner of

[1] *Diary, Vol. I., p.* 211. [2] *Vol. I., p.* 3 *Kerr's edit.*

a company of persons who advanced a sum of money to Government, and received in exchange for it an annuity. This was the foundation of our regular National Debt: and to the present day the Funds are technically called "Bank Annuities."

On the Definition of a BANKER.

64. We have still one more important misconception to clear away. Nothing can be more erroneous than the common idea as to the business of a banker. We might have expected that Gilbart would have been able to describe his own business, but his account is an utter fallacy. He says [1]—"A banker is a dealer in capital, or more properly a dealer in money. He is an intermediate party between the borrower and the lender. He borrows of one party and lends to another; and the difference between the terms at which he borrows and those at which he lends, forms the source of his profit."

And so says a Committee of the House of Commons [2]—"The use of money, and that only, they regard as the province of a bank, whether of a private person, or of the banking department of the Bank of England."

Both these extracts show a profound misconception of the nature of the business of a banker.

In former times there were many persons who acted as intermediaries between persons who wanted to lend and those who wanted to borrow. They were called *Money Scriveners*. But nobody ever thought of calling a money scrivener a banker.

At the present day, a firm of Attorneys, or Solicitors, in large practice, may have some clients who wish to lend money on mortgage, and at the same time may have other clients who wish to borrow money on mortgage. The first set may entrust their money to the firm to lend to the second set. Thus the firm would act as intermediaries between those who want to lend and those who want to borrow. But no one would call them "bankers" because they did this. They would merely act as Trustees of the money. They do not acquire any property in the money, so as to be able to appropriate it to their own purposes. On the contrary, it is only entrusted to their custody for

[1] *A practical treatise on Banking. Vol.* 1, *p.* 2.

[2] *Report from the select Committee on the Bank Act*, 1858, *p.* xxiv.

the express purpose of being applied in a certain way. The actual property in the money passes direct from the lender to the borrower, through the medium of the trustees, and if these latter appropriated it to their own purposes, they would be liable to be punished for embezzlement.

Neither are persons who lend out their own money, bankers. Those who have cash at command may invest it in the purchase of commercial bills, or in any other way. There are many who trade in this way, but they are called *Bill Discounters*, not Bankers.

65. The Italians were the founders of modern money dealing, and among them, there were three different kinds of trading in money—

1. Those who *exchanged* money: they were called *Speciarii*, *Nummularii*, *Campsores*, *Argentarii*, and *Trapezitæ*.

2. Those who *lent* out money for profit; they were called *Danistæ*, *Collybistæ*, and *Mutuatores*.

3. Those who *received* money, and in exchange for it gave bills of credit, or letters, or drafts, on their correspondents in other towns: these last were called *Cambiatores* and BANCHIERI.

Thus Galiani says[1]—"All this paper credit originated from a deposit, or a loan made, or from a Joint Stock Company"—"Banks began when men saw from experience that there was not sufficient money in specie for great commerce and great enterprises."

"The first Banks were in the hands of private persons, with whom people deposited money, and from whom they received Bills of Credit, and who were governed by the same rules as the public Banks now are. And thus the Italians have been not only the fathers, and the masters, and the arbiters of commerce; so that in all Europe they have been the depositaries of money, and are called BANKERS."

So Genovesi says[2]—"These Monti were at first administered with scrupulous fidelity, as are all human institutions made in the heat of virtue. From which it came to pass that many placed their money in deposit, and as a security received paper, which was called, and is still called, Bills of Credit. Thus private banks were established among us, whose Bills of Credit

[1] *Della moneta, p.* 323. [2] *Delle Lezioni di Economica civile. Part II., ch.* 5, § 5.

acquired gradually a great circulation, and increased the quantity of signs and the velocity of Commerce."

"The Bill of Exchange is called *drawn* by him who sells it, and is called *remitted* on the part of the correspondent who must pay it. Those who make this their special business are called Cambists, and BANKERS in the language of the great commerce of Europe."[1]

So the *Encyclopedia Methodique*, Paris, 1789, says, BANKING. "The traffic or commerce in money, which is remitted from place to place, from one city to another by correspondents and agents by means of Bills of Exchange."

The essential feature of a "Banker" is this, that when his customers place money with him, it becomes his absolute property, to deal with as he pleases, and he is no way accountable to them for the purposes he applies the money to. The customers of a banker cede to him absolutely the property in their money, and receive in exchange for it the Right to have an equal sum paid back on demand. A banker therefore is not the Trustee of his customers, but simply their Debtor.

Thus a "Banker" buys money with his *Credit;* and, moreover, when he buys commercial debts, he always does it by his Credit also, and not by cash. And this is the essential distinction between a Bill Discounter and a Banker, that the former buys bills with cash, and the latter with his own Credit. Hence, when a Bill Discounter has invested all the cash in his possession, either his own or what others have placed with him, in this way, he is at the end of his resources. But a *Banker* always buys commercial debts with his own Credit, or with his "promise to pay," and experience shows that his Credit may exceed several times the cash in his possession. Authorities differ as to how many times the quantity of his credit may safely exceed the quantity of his cash, and it may differ in different localities, and methods of doing business; but, at all events, it may do so *several* times. Thus, the business of banking is essentially to CREATE CREDIT. This Credit, of course, is made payable in money, but in practice it is very rarely actually paid in money. We have shown above that *a mutual release of debts is absolutely equivalent to a reciprocal payment of debts;* and, by the great

[1] *Ibid, chap.* xi. § 3. This work also contains much useful information on Paper Credit.

modern banking system, the enormously greater proportion of banking credit is extinguished by mutual releases of debts.

The following is the true definition of a "Banker":

A BANKER *is a trader who buys Money, or Money and Debts, by creating other Debts.*

A banker, then, is a trader who keeps an open shop for the sale of CREDIT: he may, it is true, add other species of money dealing to his business; but the above is the essential definition of "Banking." The first business of a banker is not to *lend* money to others, but to *collect* money *from* others.

On the CURRENCY PRINCIPLE.

66. The express function of a Bank, as we have seen in the preceding section being to create credit, a doctrine of considerable importance has been maintained by several writers of influence in recent times, to which we must now advert, as most discussions on banking for several years have been full of it.

We have shown, in a subsequent chapter, that the Chinese were the inventors of paper money, and that when the Government had brought the country to a state of the deepest distress by their extravagant issues of paper money, a writer sighed for the days when no paper was issued except in exchange for specie, —"Then," says he, "it was ordered that at the offices of the rich merchants who managed the enterprise, when the notes were paid in the money came out, when the bills came out, the money went in. The money was the mother, the note was the son. The son and the mother were reciprocally exchanged for each other."

This doctrine, put forth in the year 1309 by a Chinese writer, is the CURRENCY PRINCIPLE. It is this—that when a Bank is permitted to issue Notes, the Notes ought to be exactly equal to the specie paid in, and that the sole duty of the Bank in such a case is to exchange specie for paper, and paper for specie; and that the quantity of paper in circulation should always fluctuate in quantity, exactly as specie would do if there were no paper. Those writers in recent times who maintain this doctrine aver that any paper issued in excess of this principle causes a depreciation of the currency. The next enunciation of it that we are

aware of is by John Law,[1] who says—"Some are against all banks where money does not lie pledged equal to the credit."

It was upon this principle that the Banks of Venice, Amsterdam, and Hamburg were constructed. These places were the centres of a great foreign commerce, and, as a natural consequence, an immense quantity of coin of all sorts, of different countries and denominations, was brought by the foreigners who resorted to them. These coins, were, moreover, greatly clipped, worn, and diminished. This degraded state of the current coin produced intolerable inconvenience, disorder, and confusion among merchants, who, when they had to make or receive payment of their bills, had to offer or receive a bagful of all sorts of different coins. The settlement of these bills, therefore, involved perpetual disputes,—which coins were to be received, and which were not, and how much each was to count for. In order to remedy this, it became absolutely necessary that some fixed uniform standard of payment should be devised, to insure regularity and a just discharge of debts. In order to do this, the magistrates of these cities instituted a Bank of Deposit, in which every merchant placed all his coins of different weights and nations. These were all weighed, and the bank gave him credit, either in the form of notes, or an entry in their books, exactly corresponding to the real amount of the bullion deposited. The owner of this credit was entitled to have a certain quantity of gold of full weight on demand. These credits, therefore, always insured a uniform standard of payment; and it was enacted that all bills upon the respective cities, above a certain amount, should be paid in these credits, which were called bank money. The consequence was evident: as this bank money was always exchangeable for money of full weight on demand, it was always at a premium, or *agio*, as compared with the current money. The difference was usually from 5 to 9 per cent. in the different cities. The expression, *agio*, or premium, is likely to mislead, because it is evident that it was the bank money that was the true standard, and the current money that was at a discount. These banks professed to keep all this coin and bullion in their vaults. They made no use of them in the way of business, as by way of discounting bills. Thus the credit created was exactly equal to the specie deposited, and their

[1] *Money and Trade Considered*, p. 73, *edit.* 1755.

sole business was to exchange specie for paper, and paper for specie.

They were examples of the CURRENCY PRINCIPLE, and they are the models to which many persons would wish to see all banks reduced, and we shall see that they maintain that paper should fluctuate in quantity exactly as a metallic currency would do if there were no paper; and that if paper is substituted for specie, it can only maintain an equality of value with specie by being exactly equal in quantity to what the specie would have been if there were no paper.

These Banks were of no further use to commerce than that they served as a safe place to keep money, and they insured an uniform standard of payment. They made no profits by their business, but those who kept their accounts with them paid certain fees to maintain the establishment.

We shall not here discuss the soundness of this currency principle, our only object is to state to our readers clearly what it is. Many writers of the greatest influence, such as Colonel Torrens, Lord Overstone, and others, maintain that this principle ought to be applied to all Banks, and that they should not be permitted to create any notes in excess of their bullion.

Mr. Mill says:—"Further consideration shewed that the uses of money are in no respect promoted by increasing the quantity which exists and circulates in a country, the service which it performs being as well rendered by a small as by a large aggregate amount." The slightest experience will show that this dogma is utterly unfounded. Does it never happen that an increased supply of money can benefit a country? One of the acknowledged wants of Ireland at the present day is want of capital; every one admits that the introduction of fresh capital would be of the greatest service to Ireland.

He says[1]—"Another of the fallacies from which the advocates of an inconvertible currency derive support, is the notion that an increase of the currency quickens industry. This idea was set afloat by Hume, in his Essay on Money, and has had many devoted adherents since." Not only is the doctrine which Mr. Mill here derides indubitably true, though it is not an argument in favour of an inconvertible paper money, but it had many devoted adherents long before Hume was born, as every one acquainted with Economical literature knows well enough.

[1] *B.* iii., *c.* 13, § 5.

He then says:—"The substitution of paper for metallic currency is a national gain, ANY FURTHER INCREASE OF PAPER BEYOND THIS IS BUT A FORM OF ROBBERY.

"An issue of notes is a manifest gain to the issuers, who, until the notes are returned for payment, obtain the use of them as if they were real capital; and so long as the notes are no permanent addition to the currency, but merely supersede gold or silver to the same amount, the gain of the issuer is a loss to no one; it is obtained by saving the community the expense of the more costly material. But if there is no gold or silver to be superseded—if the notes are added to the currency, instead of being substituted for the metallic part of it—all holders of currency lose by the depreciation of its value, the exact equivalent of what the issuer gains."

Again he says[1]—"When metallic money had been entirely superseded and expelled from circulation, by the substitution of an equal amount of bank notes, any attempt to keep a still further quantity of paper in circulation must, if the notes are convertible, be a complete failure. The new issue would again set in motion the same train of consequences by which the gold coin had already been expelled. The metals would, as before, be required for exportation, and would be for that purpose demanded from the banks to the full extent of the superfluous notes, which thus could not possibly be retained in circulation."

We desire to call particular attention to these dogmatic assertions of Mr. Mill, and especially to the facts that he brands as robbery any creation of notes beyond the quantity substituted for specie. We shall now give an actual exposition of the practice of banking, and, perhaps Mr. Mill may be surprised to find what he brands as robbery, and whom he brands as robbers.

On the MECHANISM *of* BANKING.

67. Banks of the nature of those of Venice, Amsterdam, and Hamburg, never existed in England, and we must now explain the mechanism of banking, as it has been carried on in this country.

During the civil war, the goldsmiths of London began to receive cash of the merchants and country gentlemen, in ex-

[1] *B.* iii., *c.* 22, § 3.

change for which they gave their promissory notes payable to bearer on demand. In consequence of this they were called "bankers," and their notes were called "goldsmiths' notes," or "bankers' notes." But the goldsmiths did not charge anything to their customers for keeping their cash; on the contrary, they agreed to pay six per cent. interest for the cash left with them. In order to pay this interest, they were obliged to trade with this money, and it is in regard to the method of this trading that so much misconception exists.

Let us, for the present, leave out of consideration any private property the goldsmiths might have, and let us deal with small figures. Suppose the banker had £10,000 deposited with him by his customers, then, as he created an equal amount of debt against himself in exchange for this money, his accounts would stand thus:—

LIABILITIES.	ASSETS.
£10,000.	£10,000.

We shall now see the extreme importance of accurately stating Economic questions.

According to the method of stating this, given by Euler, the banker possesses £10,000, and owes £10,000. Euler, as well as all mathematicians, calls the money a *positive* quantity and the debt a *negative* quantity, because, if the banker's fortune were estimated, his debts would have to be subtracted from his money. In this case, the money and the debts are equal, and, therefore, according to this mode of statement, the banker would be no richer than before.

Now, so far as the banker himself only is concerned, this view is sufficiently accurate. But it is easily seen that so far as regards Economic Science it is quite inaccurate. For the banker has issued £10,000 in notes, and these circulate among the public and perform all the functions of money, until payment of them is demanded, and then, of course, they cease to exist. But the banker has the £10,000 in cash, which has become his property, and reserving a certain portion of it to meet the usual demand for payment of his notes, he may trade with the remainder, and it is quite clear that, supposing the £10,000 of his notes to be in circulation, whatever portion of cash he also issues is by so much an addition to the previously existing currency.

Now experience would soon shew him that, if some of his customers drew out their money from day to day, others would probably pay in about an equal sum, so that, at the end of the day, there would probably be not very much difference. From practical observation, we may state that, in ordinary times, a banker's balance in cash will seldom differ by more than a 36th part from day to day. So that, if he retains a tenth part in cash to meet demands for payment of his notes, that is ample and sufficient in all ordinary times.

The goldsmiths, then, soon found that they had a large quantity of bullion on their hands, which was so much dead stock, and they were able to trade with it in order to make profits to pay interest of the whole. The method of trading they adopted was to discount, or buy, commercial debts, in the form of Bills of Exchange. These Bills being payable in two or three months, their money soon came back to them with a profit.

It is commonly supposed that they advanced *money* on these bills. If they had done that, they could not have brought more than £9,000, as they kept one-tenth in their tills in cash. This, however, is an error. They did not buy the bills with cash, but with their *Credit;* and this Credit was of two forms. They either gave the merchant the amount in their Promissory Notes; or they wrote down the amount to the credit of their customer in their books, and allowed him to draw a bill upon them payable on demand. And, as above stated, they soon found that their credit might safely exceed their cash several times. Hence they found that they could extend their credit safely very far beyond the limit of £9,000. They found that keeping the £9,000 in their coffers, they could safely buy at least £40,000 in bills with their own notes. Now, supposing the rate of discount was 8 per cent., and the bills were at three months, the discount on this sum would be £800, and consequently, in exchange for bills to the amount of £40,000, he would issue £39,200 in his own notes, and his accounts would then stand thus:—

Liabilities.		Assets.	
Notes Issued . .	£49,200	By Cash	£40,000
		By Bills of Exchange	£10,000
	£49,200		£50,000

Now, by this process, the Banker added £39,200 to the previously existing currency, and his profit is clear—he pays six per cent. on £10,000, and he gains eight per cent. on £39,200.

Now, this was the business of banking, and hence the correctness of the definition given above is manifest—*a Banker is a trader who buys Money and Debts (Bills of Exchange), by creating other Debts (his own Notes or Deposits).*

Thus we see that the distinctive function of a bank, and a banker, was to issue notes, payable to bearer on demand, which were to circulate as money. *That is to create a Paper Currency*, in some cases only equal to the amount of bullion they displaced, in others, greatly exceeding it. And the meaning of the word "to bank" was to buy money and bills of exchange with such notes, that is, to create Instruments of Credit. Towards the end of the 17th century contemporary writers tell us that some of the London bankers had upwards of a million of notes in circulation.

We further see that as the banker had given an equal amount of notes for the cash he received, for which he paid interest, his only method of making profits was by augmenting the amount of previously existing currency—that is, according to Mr. Mill, he was a *robber!*

The relation in which the banker and the merchant stand to each other, after the banker has discounted the bill for the merchant by issuing his notes, also shows how indispensably necessary an exact method of statement is required to appreciate the subject of credit correctly. Some writers, who deny that credit is capital, say this—that if a person holds a bill of exchange, that is his property, and to be added to his other property, but that it is to be *subtracted* from the property of some one else, therefore, upon the whole, it is nothing.

Thus, Mr. Thornton says:—"Paper constitutes, it is true, an article on the credit side of the books of some men, but it forms an exactly equal item on the debit side of the books of others. It constitutes, therefore, on the whole, neither a debit nor a credit. The banker who issues £20,000 in notes, and lends, in consequence, £20,000 to the merchant, on the security of bills accepted by them, states himself in his books, to be the debtor of the various holders of his notes to the extent of the sum in question; and states himself to be the creditor of the acceptors of the bills in his possession to the same amount. His valuation,

therefore, of his own property, is the same as if neither the bills nor the bank notes had any existence. Again, the merchants in making their estimate of property deduct the bills payable by themselves, which are in the drawer of the banker, and add to their estimate the notes of the banker, which are in their own drawer; so that the valuation likewise of the capital of the merchants is the same as if the paper had no existence. The use of paper does not, therefore, introduce any principle of delusion into that estimate of property which is made by individuals."

Now, in the above extract, Mr. Thornton has begun by making a most extraordinary error for a banker. He supposes that the banker issues an amount of notes *equal* to the bills he discounts. That would be as much as saying that the banker charged no discount. But this is manifestly wrong. The banker retains the discount at the time of the advance, and, consequently, his property and his debts are *not* equal, but his property exceeds his debts by the sum charged as discount.

Again, though in a certain way, as regards the individuals themselves, this way of stating it has some plausibility, it is clearly quite incorrect as a scientific statement. The merchant acquires the Bill of Exchange as property given in exchange for some goods. He sells that property to his banker in exchange for the property created by his banker, viz., his Notes. Now, it is clear that the banker may put this bill into circulation, and it may perform the same functions as money until the time for its payment comes, and also the merchant may buy with the banker's notes as money, and, consequently, the Bill and the Notes are each of them exchangeable quantities, and may both be in circulation at the same time, and perform many exchanges before they are paid and extinguished. Hence each of them forms a part of the mighty mass of circulating Credit.

Such, then, was the business of banking. We need not here speak of the foundation of the Bank of England in 1694, but it is quite clear that the Legislature understood "banking" to mean issuing notes payable to bearer on demand. In 1708 an attempt was made by some other companies to do banking business; and in 1709, on the renewal of the charter, Parliament meant to confer a monopoly of banking on the Bank of England. In order to do that, there being at that time no legal definition of banking, the Act did not directly prohibit any

"bank" with more than six partners being formed, but it described what was well understood to be banking business, and it prohibited any partnership of more than six persons doing that. It forbade them "*to borrow, owe, or take up any sum or sums of money, on their bills or notes, payable at demand.*"

Thus, at this period, banking was understood to mean *borrowing*, or *owing*, money on notes payable on demand, and to forbid persons to do that was to prevent them from "banking." This Act was effectual for some time, but, about 1740, some persons tried to evade the words of the Act, and to put a stop to this, the Act of 1742 is more explicit. It says:—"And to prevent any doubt that may arise concerning the privilege, or power, given by former Acts of Parliament to the said Governor and Company of *exclusive banking;* and also in regard to erecting any other bank, or banks, by Parliament, or restraining other persons from *banking.*" It thus forbade, as before, any partnership "*to borrow, owe, or take up any sum or sums of money, on their bills or notes, payable at demand.*" So that the Bank of England might remain a corporation, "with the privilege of *exclusive banking*, as before recited."

Still, we observe that the intention of Parliament was to confer on the Bank of England the exclusive monopoly of banking. And this privilege of banking consisted in "*borrowing, owing, or taking up any sum, or sums, of money on their bills or notes, payable at demand.*" Hence, we see, that "Banking" meant the creation and issuing of "Currency;" and to prohibit persons from creating currency was, in fact, to prohibit them from doing banking business. These words were devised with the utmost care, so as to prevent any other rival, in the most comprehensive manner possible. It was supposed that no legal ingenuity could devise an expedient to evade so extensive a prohibition. The form of words adopted in this Act, was devised in reference to the methods of doing banking business at the time they were framed, and they were successful in preventing any rival bank being formed, so long as bankers adhered to that particular method of doing business. But about 30 years afterwards, bankers adopted a change in the method of doing their business, so simple, and apparently so unimportant, as scarcely to deserve attention. And it was this mere change in the form of doing

their business, that is, of creating liabilities, or currency, in a form not provided for by the words of the Act, that cut away the ground from under the Act, and was the means whereby the present Joint Stock Banks in London, were founded, and thus destroyed the monopoly of the Bank of England, because, when this mode of evading the Act was discovered, and the Bank, in dismay, applied to Parliament to put a stop to it, they were told that such monopolies were out of fashion, and their demand was refused.

Up till about the year 1772, London bankers adhered to the original method of issuing promissory notes, payable to bearer on demand. But about this time, they discontinued the issue of notes, and made their advances exclusively by giving their customers credit in their books for the amount. It appears that it was about this time that they began to give them books containing a number of printed forms. These forms were called *Cheques*, and were bills of exchange, drawn upon the banker, payable to bearer on demand. But it is usual for the drawer of a cheque to fill in the name of some one to whom it is made first payable. And these cheques may be put into circulation, exactly like bank notes.

These Cheques are nothing whatever but bills of exchange upon the banker, payable to bearer on demand. There is, however, one peculiarity about them that must be noticed. In ordinary cases no man can be compelled to accept a bill drawn upon him for a debt, without his own consent, which is signified by his writing his name upon it. But in the case of cheques, if this rule was enforced, it would have destroyed their utility, and they could never have been substituted for bank notes. A bank note bears on the face of it the obligation of the banker to pay it; but an unaccepted cheque, if it followed the usual law of bills of exchange, would be no obligation to pay without acceptance. Consequently, no man would have been safe in taking a cheque before he knew whether the banker would accept it or not. To obviate this difficulty, and to make a Cheque as like a Bank Note as possible, it was established as a custom among bankers, that the *possession of a customer's funds by a banker is equivalent to acceptance.* Consequently, if a banker has funds of his customer in his hands, he is bound to pay all that customer's cheques, to the amount of the funds in his hands, without notice

and without acceptance, to the bearer on demand, exactly as if it was his own promissory note.

Hence, Cheques are nothing but a substitute for Bank Notes. A bank note, in fact, is a double obligation, the one is an obligation to pay the customer, the original creditor, and the second is to pay the bearer, *i. e.*, any one to whom the original creditor may transfer the obligation. Now, the modern practice splits these obligations. The entry in the banker's books is the obligation to pay his customer, the permission to draw a cheque payable to bearer on demand is the obligation to pay any one the customer may transfer the debt to. And the entry in the banker's books, together with the cheque, make up the bank note.

Hence, we see, that, "Banking" consists in buying Debts with "Promises to pay;" and these "Promises to pay" may be of two forms:—

1st. Promssiory Notes payable to bearer on demand.

2ndly. Figures written down to the credit of the customers, to be drawn against by cheques papable to bearer on demand.

Up to the period when cheques were introduced the London bankers had very extensive issues of notes, but the method of doing business by cheques was found to have so many practical advantages over that by way of notes, that London bankers from that period universally discontinued the issue of notes, and adopted cheques: though they never were forbidden to issue notes until the Bank Act of 1844.

The modern system of banking, then, by means of cheques, is exactly the same in principle as the former method of Bank Notes, only it is somewhat varied in form. In each case banking consists in creating liabilities, and the modern name and form of stating these liabilities in banking accounts is the cause of an enormous amount of erroneous opinion. In the former mode of stating these accounts, it is open and patent to all the world, that the banker has created liabilities against himself by the discount of bills. In the modern form all these liabilities are stated as so much credit in his books, and are called DEPOSITS; and these *Deposits* are formed of the credit created in exchange for cash as well as bills, so that it is made to appear, and is almost universally believed, that what is classed under deposits in the published banking accounts are deposited in actual cash, whereas they are nothing but a creation of credit.

The name itself of *Deposit* is a source of much misconception. It is generally supposed that a "Deposit" in a bank means the thing deposited. But this is quite an error. The Deposit is the Credit created in exchange for the thing deposited, and when a banker discounts a bill by creating a Credit in his books, that Credit is equally a "Deposit" with the Credit created in exchange for cash. Hence, in banking language, it must always be remembered that *a Deposit is the Credit created in a banker's books; the thing deposited is the Asset, or the Security.*

The only practical difference between Bank Notes and Cheques is this, that the former were, on the face of them, direct obligations of the banker to pay the money stipulated; the latter were not direct obligations of the banker. The consequence is, that when cheques are transferred from hand to hand, it is usual to require the transferor to endorse them, so that if the banker refuses to pay them, the liability of the transferor may be preserved. In bank notes this is not usually done, because, as the holder may demand payment for them on the instant from the bank, few persons expect that the bank will fail before payment is demanded, and consequently, bank notes usually pass from hand to hand by simple delivery, without indorsement.

In order to present the difference between the old and the new system in the clearest manner, we will now contrast the two forms of stating the accounts, supposing that they denote the same operation—

Old form of Banking Accounts.

Liabilities.		Assets.	
To notes in circulation	£49,200	By Cash	£10,000
		By Bills of Exchange	40,000
	£49,200		£50,000

Modern form of Banking Accounts.

Liabilities.		Assets.	
Deposits	£49,200	By Cash	£10,000
		By Bills of Exchange	40,000
	£49,200		£50,000

Now, in examining these two forms of accounts, though they are in reality two different methods of doing the same thing, a striking difference is apparent on the face of them. In the first it is manifest, on the face of it, that the banker thus created £49,200 of Notes, or created that amount of liabilities against himself. In the second form this does not appear at all, but this sum of £49,200 appears as a "deposit," or a "balance on drawing account," and to any one who is not conversant with the subject, it seems to be a deposit of actual cash, and many persons are apt to believe that a banker has that amount of cash to trade with. Thus, when the accounts of the great Joint Stock Banks in London are published, and it appears that one has £20,000,000 of "deposits," and so on, it is almost universally believed that it has twenty millions of actual money to trade with, or lend out, as it is erroneously called. And every half-year we see summaries in the newspapers shewing that all the Joint Stock Banks have, perhaps, an aggregate of £100,000,000 of "deposits," and it is generally believed that they have that sum of money to trade with. But there never was a more complete and entire delusion. These £100,000,000 of "deposits" are not deposits in cash, but they represent the *old bank note circulation*. They are nothing but an enormous superstructure of CREDIT, built up on a comparatively small basis of bullion, exactly like the note circulation. These figures do not shew the quantity of cash at their command to trade with, but they shew the quantity of business they *have* done, and the liabilities they *have* created. These apparent "Deposits" in cash, then, are nothing but Credit created in exchange for the cash and bills which figure on the other side of the account as Assets.

These two forms of banking accounts, thus presented in contrast to each other, shew how the accounts would stand just *after* the banker has discounted his customers' bills, and *before* they have begun to operate upon their accounts, in the latter form by means of cheques. Every banker does business in exactly the same way, and, when their respective customers begin to operate by means of cheques, the following three different results may ensue —

1. The actual money may be drawn out.

2. The Credit may be transferred to the account of another customer of the same bank.

3. It may be an order to pay another bank. But in the last case, if the banker A is ordered to pay the banker B so much, the chances are that B will be ordered to pay A very much the same amount, and then an interchange of these respective orders may take place, and only the differences be paid in cash. And this is exactly the same in effect as an interchange of bank notes, and thus we see that mutual releases of debts are exactly equivalent to reciprocal payments in cash.

Thus we see that the modern system may be expressed in exactly the same language as the old one. Banking formerly consisted in the creation and exchange of instruments of credit. And so it does now. Banking equally now consists in the creation and exchange of instruments of credit, just as much as ever it did. The only difference is, that bankers have discontinued one form of the instrument, with which the popular idea of banking was most closely associated, and it was by this other form of creating credit that the London Joint Stock Banks were able to be founded, because the words of the monopoly clauses of the Acts of 1709 and 1742, only specified the former method of creating these instruments of credit.

Now, under the former system it was universally allowed that banks, by creating credit in the form of notes, created currency; under the modern system of entries, or "Deposits," cheques perform exactly the same functions as notes, consequently, in a scientific sense, they are to be considered as currency, and banks by their present system create credit now, just as much as they did before, and the supposition that the Legislature can prevent banks from dealing in Credit, by prohibiting the issue of notes, is a mere delusion. But it must, at the same time, be fully admitted that Notes may produce a greater inflation of credit than cheques, because there are many cases when Notes would pass, in which Cheques will not pass, and hence the latter system requires a broader basis of bullion, but yet, whenever they do pass, they are to be considered in all respects as the equivalents and substitutes for Notes.

These considerations afford an explanation of some very well known phenomena, which are generally misunderstood respecting Joint Stock Banks, which publish their accounts, and give interest on "Deposits," according to the rate of discount.

When the rate of discount rises very high, it is universally observed that the apparent deposits in banks decline, and it is very commonly explained by saying that when interest rises very high, people take their money out of banks to invest it in other ways. But such an explanation is paradoxical on the face of it. Banks raise the rate of interest to attract money, and not to drive it away. Besides, if one asks contractors, builders, &c., at such periods, they will say that work is stopped, because people put their money into the banks for the sake of the high interest. Thus we meet with two diametrically contrary assertions, as to the flow of money at such periods, but, if we understand the real nature of these so-called "deposits," the reason of their diminution is plain; because, when the rate of discount is raised very high, it stops the discount of bills, it stops the creation of Credit, in fact, *it is not a diminution of deposits in cash*, BUT IT IS A CONTRACTION OF CREDIT.

The very same phenomenon is usually witnessed after a great commercial crisis, such as that of 1857. In July, 1858, the aggregate of "deposits" in the Joint Stock Banks appeared to be considerably less than that in July, 1857, and this was, in fact, owing to the diminished number of bills discounted from the general contraction of mercantile operations, and by no means necessarily from a diminution in the actual cash deposited.

Now, it is generally admitted that issuing Notes is coining Credit; that it is, in fact, to all intents and purposes, creating capital, both as regards the issuers of the notes, and their effects to the public, a species of capital which is liable to be destroyed, and is capable of very serious abuse, But, it also necessarily follows, from the preceding details, that the modern system of banking is equally coining Credit; and just as much as the "Deposits," or the liabilities, created exceed the actual cash, they are equivalent to a creation of Currency, and to an increase of Capital.

Many persons say that Bills of Exchange are not Currency because they require to be discharged in money; and many more think that bills of exchange are analogous to bills of lading, because they *represent*, as they erroneously call it, money, and the other represents commodities. It is perfectly true that all bills of exchange must be expressed to be payable in money, but it is a most grievous error to suppose that they are all paid in

money. The immense majority of commercial bills are not paid in money, but by credits in bankers' books. Most men in commerce, draw bills and accept bills, that is, they have Debts due to them, and Debts due by them. These fall due at different dates, and when a trader's acceptances are falling due, he takes some of the Debts due to him to his banker, and sells them to him. The banker buys them, as we have already explained, by creating fresh liabilities of his own, and writing down so many figures to his customer's credit. When his own acceptance falls due, and is presented to him for payment, he draws a cheque upon his banker, and if the holder of the bill is a customer of the same banker, the matter is settled by a mere transfer of figures in the banker's books, if he is the customer of another bank, the two bankers have probably an exchange of debts, arising out of similar transactions on both their parts, and the debts are settled with the payment of no more coin than the difference: or if as is more usually the case the holder of the bill has deposited it with his banker, and the acceptor has made it payable at his bankers, who pays it, as a matter of course, as an ordinary cheque, the day it is due. Thus, we see, that the whole monetary business of the country is gradually reduced to the *creation and exchange of Instruments of Credit*, and the only use of the actual money is to pay the differences. Now, this is the regular practice of banking: this is the way in which the vast majority of bills of exchange in commerce are paid, and, consequently, the whole system may go on for an indefinite time and to an indefinite extent, without a single coin being required. Thus, a merchant may carry on a trade for any length of time, and pay bills to the amount of millions of money, and never touch a single coin. But these instruments of credit perform exactly the same functions as if they were coin, and in a scientific point of view they are to be considered in all respects as if they *were* coins. They are all a part of the Currency.

Both Bank Notes and Cheques are subject to the general rule of law, which affects all Instruments of Credit, that whoever takes one in payment of a debt *without indorsement*, does so at his own peril, and has no remedy against the person he receives it from, if it is not paid. And the indorsement only preserves the liability for a very short period; in almost all cases not more than 24 hours. The law intends that all bank notes and

cheques should be presented for payment within 24 hours. If the receiver of a Bank Note requires the transferor to indorse it, which is by no means unfrequently done, and if, on presenting it within reasonable time, he finds the banker has failed, he has his remedy against the transferor, just exactly as if it was a Cheque. On the other hand, if he delays presenting it beyond a reasonable time, and then finds the banker has failed, he has no remedy against the transferor, either in the case of an indorsed bank Note or a Cheque.

The erroneous notion of the real meaning and nature of "deposits," in banking language, may lead to great mistakes in estimating the stability of a bank. That depends upon a due proportion of cash being kept to meet them, and it might very well happen, that while the "deposits" were apparently mounting up, and might lead many persons to believe that the actual quantity of cash was increased, it might be nothing, perhaps, but a dangerous extension of Credit. And if this were carried to too great a length, the bank might be in the most dangerous position, just when it was apparently most flourishing. A private banker on a large scale often has an application to place £10,000, or more, to the credit of a customer; if he does this, it immediately counts as a "Deposit" in banking accounts. Again, it is a very possible case, that a large railway company might request their banker to place £100,000 to their credit. Now, if the bank does this, such a transaction goes to swell up the figures of "Deposits" in their published accounts, which may lead to very erroneous inferences by the public, who do not know the mode in which banking accounts are made up.

A consideration of this example also shows the very great misconception that is likely to be produced by an expression which is very often used regarding bankers, that they are merely agents between persons who want to lend, and those who want to borrow. This is not true in the ordinary sense of the words lending and borrowing, because in ordinary cases of lending and borrowing, the lender deprives himself of the use of the capital he lends. But, in ordinary banking, both parties have the complete use of the capital. The customer lends his money to the banker, and yet has the free use of it—the banker employs that money in promoting trade; upon the strength of its being deposited with him, he buys debts with his "promises

to pay," and the person who sells the debt has the free use of the very coin which the lender has the same right to demand.

The common notion of banking is, that it consists in lending money upon the security of bills of exchange. Such an idea, is profoundly erroneous, as it consists in buying Debts with "promises to pay," or creating liabilities. And the contingency is, that he may be called upon to pay them; no doubt theoretically speaking, he is liable to be called upon to pay all those liabilities at a moment's notice, just in the same way as it is theoretically possible that all the lives insured in a life insurance company may drop at the same moment; or, it is theoretically possible, that all the property insured in an office may be destroyed by fire at the same moment; but no one expects such a contingency to happen. Banking is like insurance, the sum in cash retained by the banker is what his experience tells him is sufficient to ensure his being able to meet any calls which are likely to be made upon him.

In order to add further proof, if possible, of the utter fallacy of the common notion that discounting bills is borrowing money, we may state, that when a customer has discounted a bill with his banker, he has parted with all property in it just as with any other article of sale. The bill becomes the absolute property of the banker, which he may sell again, or pledge, or deal with in any manner that suits his own interests best. Now, if it was a loan from the banker to his customer, it would manifestly be the duty of the customer to repay the loan in due time, and get back his bill, which would be merely deposited with the banker as security, and should be restored when the loan was paid, and which the banker would have no right to part with. But this is not the case. The banker does not receive payment from his customer, but from the acceptor of the bill, and he has a perfect right, if he pleases, to sell the debt to any one else. On the other hand, in some few instances, a customer does sometimes borrow money on the security of bills, and in these cases, the customer repays the loan and receives back his bills. But such cases are comparatively rare, and to be distinguished from the ordinary business of discounting bills.

From the foregoing considerations, we see that a merchant deals *with* credit, and a banker deals *in* credit. A merchant brings his Debts, payable some time after date, for sale, and, by

a flourish of his pen, the banker transmutes them into Debts payable instantly, which have precisely the same effect in commerce as so many sovereigns. He reaps exactly the same profit by creating a credit in favor of his customer, as if he gave him the actual cash. And the cheques drawn against these credits, so created by the banker, circulate commodities exactly in the same manner as bank notes do, which circulate commodities exactly in the same manner that gold and silver money does. Consequently, these credits, so created by the banker, are CURRENCY, or CIRCULATING MEDIUM. From this it manifestly follows, that BANKING CREDIT IS BANKING CAPITAL.

Now, in the preceding section, we have proved that mercantile credit is mercantile capital, and, consequently, as all credit is either banking, or mercantile, we arrive at this general conclusion, that CREDIT IS CAPITAL.

The preceding details also show the prodigious error of those who think that banking does not add to capital, that it only distributes existing capital. It is unquestionably true that no mode of banking can create actual gold sovereigns. But if, by means of their credit, bankers can circulate their promises to pay, and if these be voluntarily received and accepted by the community at large, at exactly the same value as if they were actual sovereigns, then just by so much as they exceed in number the quantity of actual sovereigns in the banker's possession, they are, to all intents and purposes, an *addition* to existing capital. For, not only does he save the use of the actual coin in an immense multitude of instances where it would be required if banking did not exist, and liberates it, and enables it to be applied to promote commerce, which is in its practical effects identical with an addition of actual coin to that extent, but, by the extra multiplication of his promises to pay over and above that, he is enabled to make what is, to all intents and purposes, a further addition to the moving power of commerce to an enormous extent.

Banking is, therefore, the most potent engine for the increase of the moving power of any given quantity of actual capital that it is possible to devise, consistently with keeping up the value of the currency at its level with bullion. John Law says, most justly:—"The introduction of credit by means of a bank, augments the quantity of money more in one year than a prosperous

commerce could do in ten." And just as banking spreads more extensively, does it multiply the producing power of the community. Every one knows the great economising power of railroads in diminishing the quantity of capital required to supply any given demand for commodities. Now, an extension of banking acts precisely in an analogous manner, but to a much greater degree; for, not only does it economize the actual substance to a very great extent, but it makes the "promise to pay" of equivalent value with the actual payment. And it is just in this multiplying power of capital that the principal danger of too rapid an extension of banking consists. The rate of discount always depends upon the proportion between actual capital and the demand for it, or on the debts offered for sale. A sudden change in the proportion of these, causes the most violent fluctuations in the rate of discount. If an unusual quantity of capital is thrown too suddenly upon the market, the only result must be a rapid and extreme fall in the rate of discount. Now, a too rapid extension of banking has precisely the same effect as throwing a vast quantity of capital suddenly on the market. For, not only do the actual operations of banking have all the practical effects of adding to the existing capital, but to that will be added all the evil effects of over-competition, an unnaturally low rate of discount, thereby a depreciation of the currency; an export of bullion; a joint-stock bubble mania, with all its rogueries; then a collapse, and commercial ruin.

Great and inestimable, therefore, as are the blessings and advantages of banking, there is no department of trade which is likely to produce more fatal consequences to the public by too rapid an extension of it, than too rapid a multiplication of banks. There is no *mania* which should be looked to with a more jealous eye by the public, or more carefully guarded against by the Legislature, than a bank mania.

The preceding details also show the entire fallacy of the almost universal opinion, that the London banks, public and private other than the Bank of England, are mere banks of deposit, and are not banks of issue. Thus, M'Culloch says (*Dictionary of Commerce*, Art. *Bank*):—"Banks are commonly divided into two great classes of *Banks of Deposit* and *Banks of Issue*. This, however, appears, at first sight, to be rather an imperfect classification, inasmuch as almost all Banks of Deposit

are at the same time Banks of Issue, and almost all Banks of Issue are also Banks of Deposit. But there is, in reality, no ambiguity; for, by Banks of Deposit, are meant banks for the custody and employment of the money deposited with them, or entrusted to their care by their customers, or by the public; while by Banks of Issue are meant banks which, besides employing or issuing the money entrusted by others issuing money of their own, or notes payable on demand. The Bank of England is our principal Bank of Issue, but it is, as well as the other banks in the different parts of the empire that issue notes, also a great Bank of Deposit. The private banking companies of London, and the various provincial banks that do not issue notes of their own, are strictly *Banks of Deposit.*"

This view is manifestly erroneous. A bank of Deposit is one which, like those of Venice, Amsterdam, and Hamburg, is for the sole purpose of keeping the custody of money, and the credit it creates is exactly equal to the cash deposited. A "Bank of Issue" is one that, besides that, purchases bills by means of creating credit, in addition to the cash deposited, and thus adds to the quantity of the currency. Now, all banks in England, whether they issue notes or not, added to the currency by creating credit, and, therefore, they are all to be considered, in a scientific sense, as *Banks of Issue.*

The Bank Act of 1844 was passed for the express purpose of preventing banks from creating credit, and the almost universal opinion is, that it does so—that it makes the currency vary exactly as if it were so. The preceding details shew that the ordinary business of London bankers consists in the daily creation of *millions of promises to pay.* The popular belief, that the Bank Act of 1844 prevents bankers from creating credit, is probably, since the belief in the balance of trade, beyond comparison, the most profound delusion that has deceived the public mind.

It is just because *all* banking advances are creations of credit, that every one, who really understands the mechanism of banking, has declared that banking practically augments the capital of a country. Thus, for example, Mr. Hamilton the celebrated financier of the United States, when called upon, as Secretary to the Treasury, to present a report on the expediency of establishing a national bank, says[1]:—

"The following are among the principal advantages of a

[1] *Gales and Seaton, Vol.* ii., *p.* 2083.

bank:—First, the AUGMENTATION of the active or productive capital of a country. * * * It is a well-established fact, that banks in good credit can circulate a far greater sum than the actual quantum of their capital in gold and silver. * * This faculty is produced in various ways:—1st. A great portion of the notes which are issued, and pass current as cash, are indefinitely suspended in circulation, from the confidence which each holder has that he can at any moment turn them into gold and silver. 2nd. *Every loan which a bank makes is, in its first shape,* A CREDIT GIVEN *to the borrower on its books,* the amount of which it stands ready to pay, either in its own notes, or gold and silver, at his option. But in a great number of cases, no actual payment is made in either. * * * The same circumstances illustrate the truth of the position, that it is *one of the properties of banks to increase the active capital of a country.* * * * This additional employment given to money, and the faculty of a bank to lend and circulate a greater sum than the amount in coin, *are, to all the purposes of trade and industry,* AN ABSOLUTE INCREASE OF CAPITAL. Purchases and undertakings in general can be carried on by any given sum of bank paper, or credit, as effectually as by an equal sum of gold and silver. And thus, by contributing to enlarge the mass of industrious and commercial enterprises, banks become nurseries of national wealth—a consequence as satisfactorily verified by experience, as it is clearly deducible in theory."

Thus we see that this celebrated financier knew perfectly well that all banking advances are made by creating credit; and he does not consider this to be robbery, as Mr. Mill does; nor does he at all countenance the doctrine that no increase of money can be of any service to a country; on the contrary, he pronounces that it may be extremely useful.

Now, as we have shewn that these debts may all be settled by the mere payment of differences between the mutual claims, it might so happen that they might all be equal, and no coin at all pass. It is perfectly possible, therefore, that any amount of business might be settled without any coin at all. Consequently, we observe that this is a very strong confirmation of what we have already said, that the quantity of money necessary in any country depends very much on the method of doing business, and has no relation to the quantity of commodities. It is very

common among some writers to say that the prices of commodities depend upon the quantity of money and the quantity of commodities; but the introduction of the system of Credit has completely changed the relation of money and commodities.

There is in London an office for the express purpose of exchanging the mutual claims of those bankers upon each other who are members of it. This office is called the Clearing House, and we have given an account of it in a subsequent section, by which it will be seen that millions of debts, or credits, are daily extinguished by mutual releases.

Now, when we see that cheques are merely substitutes for bank notes, that in every case where a cheque now passes, bank notes would be required if cheques did not exist: when we also see that a bill exchange on the day it is payable, becomes a cheque, which is equivalent to a bank note, it follows very clearly that all the obligations interchanged at the Clearing House form an integral part of the circulating medium. Their being exchanged at the Clearing House can make no difference to what they would be if they were presented and paid by each banker; for they have all done their duty *before* they arrive at the Clearing House—they have caused commodities to circulate, perhaps many more times than once before they come to be discharged.

We see, then, how utterly futile it is to attempt to form any estimate of the amount of paper currency in this country. Returns may be made of the stamps issued for bank notes, bills of exchange, and promissory notes; but how is it possible ever to discover the amount of cheques in circulation? If this cannot be done, it is useless to try to estimate the amount of the paper currency; and still more impossible is it to control the issue of paper, while the power of drawing cheques is unrestricted.

The great and important portion of the currency which consists of Cheques has not been sufficiently appreciated. The attention of speakers, writers, and legislators, on the *paper currency*, has been almost exclusively directed to bank notes; whereas all the ideas involved in Bank Notes are, with a small change in the form of expression, applicable to cheques; and there is no operation whatever which a bank can promote by means of Bank Notes which it cannot with equal efficacy perform

by means of Cheques. If it wishes to advance a speculation, instead of giving its customer so many of its notes, it promises to honor his cheques to an equal amount. In Scotland the system of bank notes chiefly prevails; and cheques are of more recent introduction, and more sparingly used than in England. In this country, cheques have very greatly superseded bank notes, and in many instances are far superior to them. Among other reasons, they are not such ready weapons against a bank in the hands of rivals and enemies. It has been by no means an unheard-of measure of hostility against a bank which issues notes, for its rivals to buy them up in all directions, and having accumulated a considerable amount of them, to present them for payment suddenly in a mass, in the hope that the bank may be unprepared to meet, on the instant, so great a demand for gold, and be ruined. With cheques this method of hostility is more difficult. It is not easy to conceive that any person could go round to all the customers of a bank, and accumulate such an amount of Cheques as to render a demand for payment of them in gold formidable to the bank. At all events, it would require a much more elaborate and deep-laid plot to injure a bank by the method of Cheques than of bank notes.

Seeing, then, that the nature of discounting bills of exchange is buying debts, which are to be considered just like any other articles of commerce, it follows that the same laws govern their exchangeable relations as those of any other quantities. The first duty of a banker is to maintain his own position, which he can only do by maintaining certain proportions between his actual cash and his promises to pay, or his liabilities and that proportion must vary from time to time, according to circumstances. In times of a general failure of credit, he must maintain a very much larger portion of cash compared to liabilities than in times of general confidence. Under such circumstances, his duty is to *contract* his liabilities, which he must do either by refusing to buy Debts altogether, or else by giving a lower price for them, *i. e.*, raising the Rate of Discount. And a general rise of the Rate of Discount has a tendency to discourage the offering of debts for sale, just as low price of anything else discourages its being offered for sale, except by those who positively require the cash.

On the other hand, this lowering of the price of Debts, *i. e.*,

this increase in the Value of money, or the raising of the rate of discount, has an inevitable tendency to attract bullion from where it is more abundant, *i. e.*, where the rate of discount is lower. Wherever debts are to be bought cheap, thither will bullion fly to buy them; wherever debts are sold dear, that is, wherever money is to be bought cheap, thither will Debts fly to be sold, and there will competitors be to buy money. Consequently, it is an infallible law of nature, that whenever the price of Debts differs in two markets by more than sufficient to defray the expense of sending bullion, it will cause an immediate flow of bullion to that market where Debts are to be bought cheapest, *i. e.*, where the rate of discount is highest. That is to say, if the rate of discount at Paris is greater than at London by more than sufficient to cover the expense of sending bullion, Debts will fly from Paris to London to buy bullion, and bullion will fly from London to Paris to buy Debts. The exchangeable relations of money and Debts will obey exactly the same laws as the exchangeable relations of money and wheat. Consequently, if left free and uncontrolled, the prices of Debts have a natural tendency towards equilibrium in different markets.

On CASH CREDITS.

68. The credit created by the Bankers, in the operations just described, was employed to purchase commercial bills, which arose out of the *transfer* of commodities, and we have seen that they could create credit to several times the amount of cash in their possession. And, according to the notions of some writers, this was the limit of legitimate credit. We have now to describe a species of credit of a totally different sort, invented in Scotland, and to which the marvellous progress and prosperity of that country is mainly due. The consideration of this will sorely test the dogmatic assertions of literary dreamers.

As stated in the History of Banking in Scotland,[1] the Bank of Scotland began the issue of £1 notes about the beginning of the last century. In 1727, a rival bank was founded, named the Royal Bank. In the very contracted sphere of Scotch commerce, at that period, there were not sufficient Commercial Bills to exhaust the credit of the Banks. They had, as it were, a

[1] *Theory and Practice of Banking, Vol. I., p.* 304.

superfluity of credit on hand, and the Royal Bank devised a new means of getting it into circulation.

It agreed, on receiving sufficient guarantees, to open, or create, credits in favour of respectable and trustworthy persons.

A Cash Credit is, therefore, simply a drawing account, created in favour of a customer, upon which he may operate in precisely the same manner, as on a common drawing account. The only difference being, that instead of receiving interest upon the daily balance at his credit, as is very commonly the custom in Scotland, he pays interest upon the daily balance at his debit. It is thus an *inverse* drawing account.

All these advances were made exclusively in the Bank's own notes, and they were not issued on the basis of any previous transaction.

Cash credits are applicable to a totally different class of transactions from those which give rise to Bills of Exchange, and we will now explain their nature more fully.

Every man in business, however humble, or however extensive, must necessarily keep a certain portion of ready money by him, to answer immediate demands for small daily expenses, wages, and other things. This could, of course, be much more profitably employed in his business, where it might produce a profit of 15 to 20 per cent., instead of lying idle. But, unless the trader knew that he could command it at a moment's notice, he would always be obliged to keep a certain portion of ready money in his own till, or he must be able to command the use of some one else's till. Now, one object of a cash credit is to supply this convenience to the trader, to enable him to invest the whole of his capital in business, and, upon proper security being given, to furnish him with the accommodation of a till at a moment's notice, in such small sums as he may require, on his paying a moderate interest for the accommodation.

Almost every young man commencing business in Scotland, does it by means of a cash credit. Thus, for instance, lawyers, or writers to the signet, commencing business, have occasion for ready money from day to day, before they can get in payments from their clients. It is a great bar to any young man to commence the business of a solicitor without capital, which must be either his own, or furnished him by his friends. It is an immense advantage to him and to them to have it sup-

plied by a bank, on a guarantee, a mere contingency, which they never would give if they thought there was any danger of its being enforced.

These credits are granted to all classes of society, to the poor as freely as to the rich. Every thing depends upon character. Young men in the humblest walks of life begin by making a trifle for themselves. This inspires their friends with confidence in their steadiness and judgment, and they become sureties for them on a cash credit. This is, in all respects, of equal value to them as money, and thus they have the means placed within their reach, of rising to any extent that their abilities and industry permit them. It is an undoubted fact, that multitudes of men who have raised themselves to enormous wealth, began life with nothing but a cash credit. As one example among thousands, Mr. Monteith, M.P., told the Committee of the House of Commons, in 1826, that he was a manufacturer, employing at that time 4,000 hands, and that, except with the merest trifle of capital, lent to him, and which he very soon paid off, he began the world with nothing but a cash credit!

The banks usually limit their advance to a certain moderate amount, varying from £100 to £1,000 in general, and they always take several sureties in each case, never less than two, and frequently many more, to cover any possible losses that might arise. These cautioners, as they are termed in Scotch law, keep a watchful eye on the proceedings of the customer, and have always the right of inspecting his accounts with the bank, and of stopping it at any time, if irregular. These credits are not meant to degenerate into dead loans, but they are required to be constantly operated upon, by paying in and drawing out.

The enormous amount of transactions carried on by this kind of accounts may be judged of by the evidence given before the Committee of the Commons in 1826. It was then stated that, on a credit of £1,000, operations to the extent of £50,000 took place in a single week. Its effects, therefore, were exactly the same as if there had been 50,000 sovereigns. Others stated that, on a cash credit of £500, operations to the amount of £70,000 took place in a year. One witness stated that during twenty-one years in a very moderately-sized country bank, operations had taken place to the amount of nearly £90,000,000,

and that there had never been but one loss of £200 on one account, and that the whole loss of the bank during that period did not exceed £1,200. Now, the whole of these gigantic operations were transacted by creations of pure credit. At that time it was conjectured that there were about £12,000 cash credits guaranteed to persons in Scotland, and that there were about 40,000 persons as sureties, who were interested in the integrity, prudence, and success of the others. The witnesses before the Lords declared that the effects of these were most remarkable on the morals of the people.

But the operations of these cash credits was immensly extended beyond mere commerce, and their advantages are more openly and strikingly displayed in the prodigious stimulus it gave to the agriculture of Scotland during the last century. They have, indeed, been the main cause of making it what it is. In the Scottish system of farming, leases almost universally prevail, and a farm is not entrusted to a man who is not educated to his business. He usually enjoys nineteen years' security of tenure; or, where leases are granted for the purpose of reclaiming land, for much longer periods. Now, suppose a farmer is known to be active, skilful, and industrious, and obtains a farm upon lease, which is capable of great improvement, he goes to the bank, and, upon the security of his lease and some friends, who become bound for him, the bank grants him a cash credit. With this advance—pure Credit—he reclaims the land, employs the people, reaps the harvest, and, when that is gathered, pays back the loan.

It was in this manner that that prodigious progress in agriculture was made in Scotland. There were immense quantities of reclaimable land, and abundance of unemployed people, but no capital, or money, to set their industry in motion. Seeing this state of matters, the Edinburgh banks opened branches in numerous parts of the country, and sent down boxes full of £1 notes, and granted cash credits to the farmers. These notes were universally received as readily as coin. The farmers made their purchases and paid wages with them; and the enormous tracts of barren land were changed into fertile corn fields. Now, these £1 notes were not a substitute for any specie, they did not supersede or displace any previously-existing money, they were a pure addition to the existing money; and, seeing

all this, what are we to say of the doctrines of those writers, who maintain that no increase of money can be of any use to a country, and that to issue paper in excess of specie is robbery?

Commerce and agriculture, therefore, received their prodigious stimulus from these Cash Credits. But they were of still greater use in a public point of view. Almost all the great public works of every description were created by means of Cash Credits. One witness stated that the Forth and Clyde Canal was executed by means of a Cash Credit of £40,000 granted by the Royal Bank. And, in a similar way, whenever any other great public works are to be done, such as roads, bridges, canals, &c., the invariable course is to obtain a large Cash Credit at one of the banks.

The advantage to the person who has a cash credit is, that he only pays interest from day to day on the sum he actually has at his debit, whereas in discounting a bill of exchange, he pays interest on the whole amount of his credit, whether he uses it or not, and discount is a trifle more expensive than interest. The Bank would, therefore, naturally prefer to employ its resources by way of discount, if it could, rather than cash credit. There is also a further disadvantage attending them, that they cannot be called upon on a sudden emergency, and if there be a run upon the bank, the security cannot be negotiated like a bill of exchange. It is, therefore, only where a bank has a superfluity of credit, which it cannot employ profitably, that it would resort to a cash credit, and also when there is but a slight chance of a run upon it.

For these reasons, Cash Credits have always been looked upon with a very unfavourable eye by London Bankers, and for very good reasons. In the first place their credit, until recently, was not so solid and well established as that of the principal Scotch banks. These originated cash credits in consequence of their issuing £1 notes, and London Bankers do not issue circulating credit in the form of notes—they can always find employment for their cash—and they are more liable to runs.

All these marvellous results, which have raised Scotland from the lowest state of barbarism up to her present proud position, in the space of 150 years, are the children of pure CREDIT. It is no exaggeration whatever, but a melancholy truth, that at the period of the Revolution of 1688, and the establishment of the

Bank of Scotland, that country, partly owing to such a series of disasters as cannot be paralleled in the history of any other independent nation, and partly owing to its position in the very outskirts of the civilized world, and far removed from the humanizing influence of commerce, divided, in fact, into two nations, aliens in blood and language, was the most utterly barbarous, savage, and lawless kingdom in Europe. And it is equally undeniable that the two great causes of her rapid rise in civilization and wealth, have been her systems of national Education and Banking. Her system of banking has been of infinitely greater service to her than mines of gold and silver. Mines of the precious metals would probably have demoralized her people. But her banking system has tended immensely to call forth every manly virtue. In the character of her own people, in their steadiness, their integrity, their honour, Scotland has found wealth infinitely more beneficial to her than the mines of Mexico and Peru.

The express purpose of these banks was to create credit, incorporeal entities created out of *Nothing*, for a transitory existence, and then, having performed their functions, vanishing again into the *Nothing* from whence they came. And has not this *Credit* been CAPITAL? Will any one, with these results staring the world in the face, believe that it is maintained by writers, who are still considered as Economists, that the effects of credit are purely imaginary!—that Credit conduces nothing to the increase of wealth!—That Credit conduces nothing to production!—That Credit only *transfers* existing capital!—And that those who maintain that Credit is Productive Capital, are such puzzled-headed dolts as to think that the same thing can be in two places at once!!

Now, we observe, that these Cash Credits, which have produced such marvellous results, are purely of the nature of what is called *Accommodation Paper* in England. They are not based upon any previous operations, nor upon the transfer of commodities already in existence. They are created for the express purpose of *creating, or forming, future* products, which would either have had no existence at all but for them, or, at all events it would have been deferred for a very long period, until solid money could have been obtained to produce them. Thus we have an enormous mass of exchangeable property, created by the

mere will of the bank and its customers, which produces all the solid effects of gold and silver, and when it has done its work, it vanishes again into nothing, at the will of the same persons who called it into existence. Hence we see that the mere will of man has *created* vast masses of wealth out of *Nothing*, and then DECREATED them into NOTHING, which, having served their purpose, after a time were

"Melted into air, into thin air."

But their solid results have by no means faded like the baseless fabric of a vision, leaving not a rack behind. On the contrary, their solid results have been her far-famed agriculture, the manufactures of Glasgow and Paisley, the unrivalled steamships of the Clyde, great public works of all sorts, canals, roads, bridges, and poor young men converted into princely merchants.

What the Nile is to Egypt, that has been her Banking system to Scotland; and it was fortunate for her that the foundations of her prosperity were laid broad and deep before the gigantic fallacy was dreamt of, that the issues of banks should be inexorably restricted to the amount of gold they displace, and before Mr. Mill had proclaimed to the world that those who created paper beyond that are robbers!

On OPEN CREDITS.

69. We have seen that Cash Credits are always created to forward a future operation, and are never founded on a past one. There is always, however, collateral security taken, so as to protect the Bank against loss. In the keen spirit of competition, however, a hazardous system has sprung up of granting these credits without collateral security. This system is a good deal practised abroad, we believe, and is called *Crédit à Decouvert*, and, in this country, *Open Credits*. It is manifestly far more hazardous than Cash Credits, or common discounting, because there are always two names at least in such cases. We believe that the Joint Stock Banks, which failed a few years ago, indulged to a great extent in this dangerous system.

On ACCOMMODATION BILLS.

70. We now come to a species of Credit, which will demand great attention, because it is the curse and the plague spot of Commerce, and it has been the great cause of those frightful

commercial crises, which seem periodically to recur; and yet, though there can be no doubt that it is in many cases essentially fraudulent, yet it is of so subtle a nature as to defy all powers of Legislation to cope with it.

We have shown, by the exposition of the system of Cash Credits, that there is nothing essentially dangerous or fraudulent in a Credit being created for the purpose of promoting future operations. On the contrary, such Credits have been one of the most powerful weapons ever devised by the ingenuity of man to promote the prosperity of the country. A certain species of this Credit, however, having been grossly misused for fraudulent purposes, and having produced great calamities, we must now examine wherein the danger and the fraud of this particular form of Credit lie.

When a Bill of Exchange is given in exchange for goods actually purchased at the time, it is called a Real Bill, and it is supposed by many writers, and even by many commercial men, that there is something essentially safe in it, because, as the goods have been received for it, it is supposed they are always there to provide for the payment of it; and that only so much Credit is created as there are goods to redeem it. Thus, in the article *Credit*, in the *Encyclopædia Britannica*, it is said:—"Every sum of Credit, therefore, must be founded on a transfer of a corresponding sum of Capital, and the whole amount of Credit existing, at any time, can never exceed that of the lent capital."

When we see such gross, dense, *crassa ignorantia* in a publication of the character and pretensions of the *Encyclopædia Britannica*, what are we to expect from the general public?

Leaving out of consideration at present the cases where Credit is created without the transfer of any capital at all, it is manifest, from the description of the system of Credit already given, that it is utterly erroneous to say that the quantity of Credit cannot exceed the quantity of Capital lent. A Bill of Exchange, it is true, only arises out of a transfer of goods, but then a fresh bill is created at *each* transfer. In the ordinary course of business, there will always be, in general, at least *twice* the amount of bills to what there are goods. But if twenty transfers took place, twenty bills would be created. If goods to the amount of £100 were transferred twenty times, supposing even that the price of the goods did not change, which it most

assuredly would, there would be Credit created to the amount of £2,000. And it would only be the last holder of the goods who would have them, and be enabled to devote the proceeds to the payment of the last bill only. The remaining nineteen bills must manifestly depend upon other sources for payment.

The security, therefore, which is supposed to reside in Real Bills, on account of their being founded on the transfer of goods, is shewn to be, to a great extent, imaginary. Let us suppose, however, that A sees that a profitable operation may be done. The Bank will not, as traders do, make him an advance on his own name alone. It must have at least *two* names. A therefore goes to B, and gets him to join him as security to the Bank, on engaging to find the funds to meet the bill when due. A then draws a Bill on B, who accepts it to *accommodate* A, as it is called, and such a Bill is called an *Accommodation Bill.*

The Bill thus created without any consideration, as it is termed in legal language, or, in common language, without any transfer of goods, may be taken to a Banker to be discounted like any other bill, an operation may be performed, and, if successful, the bill may be paid with the proceeds.

Stated, therefore, in this way, there is nothing more objectionable in such an accommodation bill than in any ordinary real bill. The security is just the same in one case as in the other. In the one case goods *have been* purchased, which will pay the bill: in the other case goods *are to be* purchased, whose proceeds are to pay the bill. In fact, we may say that all Commercial Credit is of this nature, because a Credit is created to purchase the goods whose proceeds are to pay it.

There is, therefore, clearly nothing in the *nature* of this species of paper worse than in the other, and, when carefully used, nothing more dangerous. Cash Credits, which have been one of the safest and most profitable parts of Scotch banking, and have done so much for the country, are all of this nature. They were created without any anterior operation, for the express purpose of stimulating future operations out of which the Credit was to be redeemed. There is, therefore, not anything more criminal, atrocious, and vicious in the one system rather than in the other. Or, if there be, the criminality and atrocity must lie in the difference between *have been* and *is to be.*

Nevertheless, as it is indubitably certain that most of those

terrible commercial crises which have so frequently convulsed the nation have sprung out of this species of paper, it does merit a very considerable portion of the obloquy and vituperation heaped upon it. It is, therefore, now our duty to investigate the method in which it is applied, and to point out wherein its true danger lies.

The security supposed to reside in Real Bills, as such, is, as we have seen, exaggerated. But there is at least this in them, that as they only arise out of the real transfers of property, their number must be limited by the nature of things. However bad and worthless they may be individually, they cannot be multiplied beyond a certain extent. There is, therefore, a limit to the calamities they cause. But we shall show that, with *Accommodation Bills*, the limits of disaster are immensely and indefinitely extended, frequently involving in utter ruin all who are brought within their vortex.

We shall now endeavour to explain to our readers, wherein the difference between real and accommodation paper consists, and wherein the true danger lies.

Let us suppose that a manufacturer, or wholesale dealer, has sold goods to ten customers, and received ten *bonâ fide* trade bills for them. He then discounts these ten bills with his banker. The ten acceptors to the bills, having received value for them, they are the principal debtors to the Bank, and are bound to meet them at maturity, under the penalty of commercial ruin. The Bank, however, has not only their names on the bills, but also that of its own customer, as security. It, moreover, generally keeps a certain balance of its customer in its own hands, proportional to the amount of the limit of discount allowed. Now, even under the best circumstances, an acceptor may fail to meet his bill. The Bank then immediately debits its customer's account with the amount of the bill, and gives it him back. If there should not be enough, the customer is called upon to pay up the difference. If the worst comes to the worst, and its customer fails, the Bank can pursue its legal remedy against the estates of both the parties to the bill, without in any way affecting the position of the remaining nine acceptors, who, of course, are still bound to meet their own bills. Even supposing, however, it is only the acceptor who fails to meet his bill, the Bank would not probably take a second bill upon him,

nor would a dealer sell his goods again to him, after giving him the annoyance of having to take up his bill.

In the case of accommodation paper, there are very material differences. To the eye of the banker, there is no visible difference between real and accommodation bills. They are, nevertheless, very different, and it is in these differences that the danger consists.

In accommodation paper, the person for whose accommodation the drawing, indorsing, or accepting, is done, is bound to provide the funds to meet the bill, or to indemnify the person who gives his name. In the most usual form of accommodation paper, that of an acceptance, the acceptor is a mere surety, the drawer is the real, principal debtor.

Now, suppose, as before, that A gets ten of his friends to accommodate him with their names, and discounts these bills at his banker's, it is A's duty to provide funds to meet every one of these bills at maturity. These is, in fact, only one real principal debtor, and ten sureties. Now, these ten accommodation acceptors are probably ignorant of each other's proceedings. They only give their names on the express understanding that they are not to be called upon to meet the bill; and, accordingly, they make no provision to do so. If any one of them is called upon to meet his bill, he immediately has a legal remedy against the drawer. In the case of real bills, then, the bank would have ten persons, who would each take care to be in a position to meet his own engagement; in the case of accommodation paper, there is only one person to meet the engagements of ten. Furthermore, if one of ten real acceptors fails in his engagement, the bank can safely press the drawer; but if the drawer of the accommodation bill fails to meet one of the ten acceptances, and the bank suddenly discovers that it is an accommodation bill, and they are under large advances to the drawer, they dare not, for their own safety, press the acceptor, because he will, of course, have immediate recourse against his debtor, and the whole fabric will probably tumble down like a house of cards. Hence the chances of disaster are much greater when there is only one person to meet so many engagements than when there are so many, each bound to meet his own.

We see, then, that the real danger to a bank in being led into discounting accommodation paper is, that the position of prin-

cipal and surety is reversed. They are deceived as to who the real debtor is, and who the real principal is, being precisely the reverse to what they appear to be, which makes a very great difference in the security to the holder of the bills. To advance money by way of cash credit, or by loan with security, is quite a different affair; because the bank then knows exactly what it is doing, and, as soon as anything occurs amiss, it knows the remedy to be adopted. Moreover, it never permits the advance to exceed a certain definite limit, but it never can tell to what length it may be inveigled into discounting accommodation paper, until some commercial reverse happens, when it may discover that its customer has been carrying on some great speculative operation, with capital borrowed from it alone.

Such appears to us to be the true explanation of the real danger of accommodation paper, and which was given in the first edition of this work, and we may say that its correctness has received the sanction of the high authority of Mr. Commissioner Holroyd, who quoted it in his judgment in the case of the great leather frauds, *Laurence, Mortimer, and Schrader*, as appears in the *Standard*, March 7th, 1861.

To explain how such things are possible, we may, perhaps, call attention to a delusion which is very prevalent among uninformed writers, namely, that Bills of Exchange are paid in money. It is true that Bills of Exchange must always be expressed to be payable in money, but, as the reader may see in the preceding section, very few bills are really ever paid in money. When a customer has a banking account, the banker discounts his bills by writing down the amount to his credit, and this credit is called a DEPOSIT. The customer always pays his bills by drawing upon this credit, and when it gets low, the usual practice is for him to discount a fresh batch of bills. Thus, in ordinary times, the previous debts are always paid by creating new debts. No doubt, if the banker refuses to discount, the customer must meet his bills in money, but then no trader ever expects to do so. If his character be good, he counts upon discounts with his banker almost as a matter of right, and, therefore, to call upon him to meet his bills in money may oblige him to sell goods, &c., at a great sacrifice, or may cause his ruin.

However, it is always supposed that the bills discounted are good ones, that is, they could be paid in money if required.

Thus, though in common practice very few bills are really paid in money, it is manifest that the whole stability of the Bank depends upon the last bills discounted being good ones.

Now, let us suppose that for some time a customer brings good bills to the Bank, and acquires a good character, and thus throws the banker off his guard: meeting some temporary embarrassment, perhaps, he is in difficulty to meet his bills. In order to get over this difficulty, perhaps he goes to some man of straw, and perhaps, for some trifling consideration, gets him to accept a bill, without having any property to meet it. He then takes this fraudulent bill to his banker. Thrown off his guard, perhaps, by his previous regularity, the unsuspicious banker buys this bill, and gives him a deposit for it. This deposit goes to pay the former bills. In the mean time, the rotten bill is falling due, and must be met. The acceptor has manifestly no means to meet it, and the only way to do so is to create some more of these rotten bills. Now, the drawer may be speculating in trade and losing money every day; but his bills must be met, and there is no other way of doing so but by constantly creating fresh rotten bills to meet the former ones. By this means, the customer may extract indefinite sums of money from his banker, and give him in return so many pieces of paper! Now, when times are prosperous and discounts are low, this system may go on for many years. But at last a commercial crisis comes. The money market becomes "tight." Bankers not only raise the rate of discount, but they refuse to discount so freely as formerly; they contract their issues. All these rotten bills are in the bank, and must be met. But, if the bankers refuse to discount, they must be met with *money*. But all the property which the conspirators ever had may have been lost twenty times over, and, consequently, when the crisis comes, they have nothing to convert into money! Then comes the crash! Directly the banker refuses to pay his customer's bills by means of his own money, he wakes to the pleasant discovery that he has been paying all his customers' bills for many years with his own money!

This is the *rationale* of accommodation paper; and here we see how entirely it differs from real paper. Because, with real paper, and *bonâ fide* customers, though losses may come, still, directly the loss occurs, there is an end of it. But with accom-

modation paper, the prospect of a loss is the very cause of a greater one being made, and so perpetually in an ever-widening circle, till at last the canker may eat into his assets to any amount almost. It is also clear that if a man, having got a good character, may sometimes do so much mischief to a single banker, the capacity for mischief is vastly increased if, from a high position and old standing, he is able to discount with several banks, for he is then able to diminish greatly the chances of detection.

It would no doubt greatly assist the understanding of this subject to give an account of one of these cases, but to do so at sufficient length would occupy too much space in a general work on Economics. If any readers care to investigate the subject more particularly we may refer them to our *Theory and Practice of Banking*, 2nd Edit. 1866, Vol. I., p. 147, where a full analysis of the great case of *Laurence, Mortimer, and Schrader* is given.

On the Transformation of Temporary Credit *into* Permanent Capital.

71. We have now to give an example of the use of Credit which will startle and amaze our readers; and of which we have never seen the slightest notice any where else.

Sixteen hundred years ago Diophantus said:—Λεῖψις ἐπὶ λεῖψιν πολλαπλασιασθεῖσα ποιεῖ ὕπαρξιν.

Defect multiplied into defect gives existence—

That is $- \times - = +$. So also, without any reference to Algebra, Roman Law said—Qui obligatione liberatur videtur cepisse quid—repeated in the Basilica—ὁ ἐλευθερούμενος ἐνοχῆς δοκεῖ τι εἰληφέναι—as De Savigny says—"The release of debt is the gift of an equal amount of money."

Thus in Commercial Algebra a Release from a Debt is in all cases absolutely equivalent to a Payment in money, in strict accordance with the principle that $+ \times +$ is always equivalent to $- \times -$.

72. When it is published to the world that the Bank of England has a paid-up Capital of £14,000,000, and that the

various Joint-Stock Banks of London have paid-up Capitals of these magnitudes—

	£
London and Westminster Bank - -	2,000,000
Union Bank - - - - -	1,200,000
London Joint-Stock Bank - - -	1,200,000
London and County Bank - - -	1,000,000

and many others of lesser amount, does not the whole world, except these very few who are conversant with the mechanism of banking, believe that the Bank of England and the Joint Stock Banks have these sums of capital paid up in hard money?

What will they say then when they learn that this idea is pure *moonshine?* These Banks never had anything like that sum paid up in actual money at all. Of course it is utterly impossible to tell how much was ever paid in money; but this we believe we are safe in saying, that not the half of these sums was ever paid up in *money.* At least half of these gigantic sums of so-called paid up capital are nothing more than the *Bank's own* CREDIT *turned into* CAPITAL!

In order to understand how this was done, we have to explain how the Capital of the Bank of England was increased in 1697. The first subscription of £1,200,000 was paid up in money, which was all advanced to Government. In 1696, the Bank stopped payment under circumstances which we have fully detailed elsewhere,[1] and its notes fell to a discount of 20 *per cent.* In February, 1697, Parliament took in hand the restoration of Public Credit. It was determined to increase the Capital of the Bank and four-fifths were to be received in Exchequer tallies, and one-fifth in the Bank's own notes. In pursuance of this Act £800,000 was paid in in Exchequer tallies and £200,000 in the Bank's own depreciated notes, which were taken at their full value as cash. And thus we see at once that at the first *augmentation of Capital,* £20,000 of the *Capital* consisted of its own *Depreciated Notes,* or CREDIT. And the Bank was authorized to issue an amount of Notes equal to the amount of this increase of Capital.

An exactly similar proceeding is described in the history of banking in Scotland.[2] In 1727 the Bank of Scotland increased

[1] *Dictionary of Political Economy, Art. Banking in England,* § 78; *and Theory and Practice of Banking, Vol. I., p.* 147. *2nd Edit.* 1866.

[2] *Dictionary of Political Economy, Art. Banking in Scotland,* § 288.

its Capital. The subscription was paid up partly in the bank's own notes. An outcry was made against this, but the Directors justly answered—"But the objectors do not at all consider this point, for the payments are many of them made in specie, and *bank notes are justly reckoned the same as specie when paid in on a call of stock, because, when paid in, it* LESSENS *the* DEMAND *on the Bank.*"

Here we see that the Directors clearly understood that the *Release of a Debt* is in all respects equivalent to the PAYMENT *of Money*. The bank had issued its notes. For whatever reason they were issued, they were, as said *Negative* quantities, or obligations, and the bank was debtor to the holders of them. When the call was made, the subscriber might either *pay money*, or *release* the bank from its *debts;* and the two operations were absolutely equivalent. At every further increase of capital, the very same operation would be repeated; payment in money and in the Bank's own notes, would always be treated as exactly equivalent; and hence we see that at every fresh increase of capital, a certain quantity of the Bank's own TEMPORARY CREDIT would be turned into PERMANENT CAPITAL.

Thus we see that the Parliament of England and the Directors of the Bank of Scotland, who were wholly innocent of Algebra, and were probably equally innocent of Roman Law, simply from their own practical Commercial instinct, treated the *Release of a Debt* as equivalent to a *Payment in Money.*

Such are the methods by which the Capital of a Joint Stock Bank, which issues notes, may be increased. It might be thought, perhaps, that it is only banks which issue notes that can turn their own Credit into Capital. But that is a complete error. We have seen, in this section, that the very essence of Banking consists in making advances by creating debts, either in the form of notes, or Credits in their books, called DEPOSITS. Thus, all the Joint Stock Banks in London, other than the Bank of England, do business exclusively by creating Deposits. Now, suppose a customer of one of these Banks has a balance, or Deposit, on his account. The Bank determines to increase its Capital, and the customer wishes to take part of the stock. He may either pay in money, or he may give the Bank a cheque on his account. This is exactly the same thing as paying the Bank in its own notes. It is the *Release of a Debt.* Supposing

he has not enough on his account to pay for the stock he wishes to purchase, he may bring the Bank bills to discount. The Bank discounts these bills, or buys these debts, by creating another debt, in the form of a Credit, or a Deposit, on the customer's account, which is a *Negative* quantity, exactly equivalent to a Bank note. The customer then gives the Bank a cheque on his account, that is, he releases it from the debt it has just created in his favour. *And, that Debt released, then becomes augmentation of Capital.* Hence, we see that the Bank first created the Credit, and it was then turned into Capital.

It is true that this method cannot be adopted to so great an extent by the public when the Bank does not issue notes; because the general public would not have any claims against the Bank, but only its own customers, and those who might happen to have cheques given to them by them. Still, as far as it goes, the principle is the same. And this is the way in which the capital of all Joint Stock Banks is increased, and it may go on to any extent without any payment in money.

In a precisely similar way, when great public loans are contracted for, a very large portion of them is always created by means of Credit. The customers of a Bank wish to subscribe to a loan. They bring it a batch of bills to discount. They draw cheques against the deposits created on the discount of these bills. These cheques may be paid into the credit of the great contractors, at their bankers, and transferred an indefinite number of times, without ever being required to be discharged in money; they may, in fact, be discharged by being cancelled against other Credits.

On the CLEARING HOUSE.

73. In the preceding section we have shewn the application of the doctrine of Roman Law that the *Release of a Debt* is an increase of wealth exemplified on such a scale of magnitude and importance, as few people ever dreamt of. We have now to give an example of the Roman doctrine of *Compensation* carried out on a scale of still more colossal magnitude.

The first example of this principle that we are aware of, carried out on a great scale is that mentioned by Boisguillebert.[1]

[1] *Dissertation sur la Nature des richesses, ch.* ii.

The merchants of France finding it inconvenient to keep a great stock of bullion ready to pay their bills, adopted the plan in the 16th century, of making all their bills payable at the fair of Lyons. The bills circulated throughout the country, and got perhaps covered with indorsements. At a certain period during the fair, the merchants met for a general settlement and adjustment of accounts; and Boisguillebert says that by this means transactions to the amount of 80 millions were settled without a sou in money.

We thus see how erroneous is the supposition that all Bills of Exchange are settled finally in money. Even at this early period the French merchants had found out the advantage of meeting periodically to adjust their debts by mutual Releases, or by Compensation, rather than by payment in money. The same practice was usual at other fairs. Now these Bills had passed through many hands, and had performed many exchanges before they were exchanged and extinguished, and thus they had performed exactly the same functions as money.

In 1775 some of the London bankers established a similar daily custom among themselves.

We may explain the advantages and operations of the Clearing House in detail.

Every London banker has, every morning, claims against all or, at least, most of his neighbours, and, of course, he has to meet claims from them. It used to be the custom for every banker, the first thing in the morning, to send out a number of clerks, to collect the debts that were due to him from his neighbours, who, of course, were obliged to keep cash or notes to meet them. The Metropolis is portioned out into districts called "walks" and each clerk has to collect all the bills, cheques, &c., within his walk. These claims are called *bankers' charges*, and are paid usually in Bank notes, in some cases by cheques drawn upon the Bank of England. The slightest reflection will shew the waste of Bank notes, caused by this barbarous and clumsy method of settling bankers' charges. It is evident that a very large amount of Bank notes might be saved if the bankers had some method of balancing their claims against each other, and settling only the difference in Bank notes. What the amount of Bank notes which are positively wasted by this method may be is not very easy to tell. It was stated in evidence, before the Committee

of the House of Commons, on one occasion, that one bank alone, the London and Westminster, was obliged to keep £150,000 of notes for this very purpose, which, by a better method, might have been set free, and would have, to all intents and purposes, been so much additional trading capital. Now, if this Bank alone, many years ago, was obliged to keep this enormous sum unprofitable, what must have been the total amount wasted in this manner by all the bankers?

About 1775, the inconvenience of sending out to collect these charges led a number of the city bankers to organize an exchange among themselves, on a similar plan to that already practised among the banks in Edinburgh. They met in a room, and exchanged their mutual claims against each other, and paid only the difference in cash, or Bank notes. It is stated in the Bullion Report, that in the year 1810 there were 36 bankers who cleared; that the average amount of drafts, &c., passed through the Clearing House every day was about £4,700,000, and that all the balances on this account were settled by about £220,000 in Bank notes. The Clearing House was merely an assemblage of private bankers; when the joint stock banks were instituted in the city, they were rigidly excluded until 1854, when the intolerable inconvenience caused to them by the large amount of notes they had to keep idle to meet the "charges," set a question afloat of organizing another Clearing House among themselves. Moreover, it is said, that the private bankers, themselves, felt the inconvenience of the heavy "charges" of the joint stock banks. Partly owing to these circumstances, and partly, we hope, owing to the feeling against the joint stock banks having abated, the London and Westminster, the Union, the London Joint Stock, the London and County, and the Commercial Banks, were admitted to the Clearing House in August, 1854, and the Southwark Branch of the London and Westminster in August, 1855. The latter being remarkable, not only as a branch of a bank being treated as an independent bank, but also as not being in the City of London. The Bank of England was not admitted to the Clearing House till 1864.

The mode of doing business is as follows:—The bills and cheques which each banker holds on the other clearing banks, are sorted in separate parcels, and at 10.30 a clerk from each bank arrives at the Clearing House. He delivers to each of the

other clerks the obligations he has against his house, and receives from each the obligations due from his own. When these obligations are interchanged, each clerk returns to his own bank. The same process is repeated at 2.30. Each bank has till 4.55 to decide whether it will honour the drafts upon it; if it does not return any drafts upon it before that hour, it is held to have made itself liable on them to the Clearing House. At 4.45 the business closes, and the accounts are made up; and so admirable is the system, that in settlement of the claims *not a single Bank note or sovereign passes.*

Each clearing bank keeps an account at the Bank of England, and the inspector of the Clearing House also keeps one. Printed lists of the clearing banks are made out for each bank, with its own name at the head, and the others placed in a column in alphabetical order below it. On the left side of these names is a column headed "Debtors," and on the right side are marked "Creditors." The clerk of the Clearing House then makes up the accounts between each bank, and the *difference* only is entered in the balance sheet, according as it is debtor or creditor. A balance is then struck between the debtor and creditor columns, and the paper delivered to the clerk, who takes it back to his own bank. The balance then is not paid to, or received from, the other bankers, as formerly, but it is settled with the Clearing House, which keeps an account itself at the Bank of England. The accounts are settled by means of a species of cheque appropriated to the purpose, called *transfer tickets.* They are of two colours, white and green, the white when the Bank has to pay a balance to the Clearing House, the green when it has to receive a balance from it. They are signed by some authorized official of the Bank.

By this admirable system, transactions to the amount of many millions daily are settled without the intervention of a single Bank note.

The two methods which London bankers have of settling their mutual claims, which we have described, by collecting the charges in the morning, and by the Clearing House, suggest several important reflections upon the circulating medium, and the Act of 1844. That Act fixed the sum of £14,000,000, since extended to £15,000,000, as the limit below which the requirements of business would probably not permit the internal circu-

lation to fall. But there is this objection to it, that it was *fixed with reference to a particular method of doing business.* If all the London bankers, were admitted to the Clearing House, there would immediately be a very large quantity of Bank notes disengaged from business, and they would either disappear from circulation altogether, or else they might be employed as fresh capital in discounting bills and making loans. On the other hand, let us suppose the Clearing House dissolved, and the clearing banks to revert to the barbarous method of settling their mutual claims practised by the non-clearing banks, several millions of Bank notes would be required to settle their claims. We are satisfied that between these two extreme methods of transacting business—either there being no Clearing House at all, and all the banks demanding payment from each other of their claims in Bank notes, and on the other hand, all the banks entering the Clearing House, there would be a difference of Bank notes necessary to transact the same amount of business of not less than £12,000,000. Now, it is perfectly manifest, that if the Clearing House were dissolved, the additional quantity of Bank notes necessary to transact business would not in any way affect prices or business; nor if all the banks were to enter it, could the quantity of Bank notes withdrawn from circulation affect prices or business. Consequently, we observe, that the quantity of Bank notes requisite to transact business depends very much on the particular method of settling claims.

It appears, then, to us to be a fundamental and philosophical objection to all attempts to fix the numerical amount of Bank notes which may be issued by the Bank, that it depends very much on the method of doing business what amount will be required. Consequently, if any Act fixes that amount, and a change takes place in the method of doing business, it must necessarily be fatal to the principle of such an Act. And these remarks touch not merely the Act of 1844, but some of the objections to it; for, in the first place, if the method of doing business upon which the Act is founded, be improved so as to dispense with a large quantity of the notes permitted to be issued by the Act, the Act fails in this—that it contains no power to compel these notes which are so disengaged, to be withdrawn from circulation, which, if the principles of the Act were true, would be a redundancy of the currency. On the

other hand, those persons who complain of the restricted amount allowed to be issued by the Act, should, in the first instance, economise the use of those already permitted to be issued to the greatest possible extent, before they demand new issues. Now, an improved method of doing business by the London bankers would certainly liberate a very large amount of Bank notes, which are at present, as we may say, wasted, and afford so much relief to the alleged contraction of the currency.

The operations of the Clearing House also enable us to dispel a very prevalent error among those persons who maintain that bills of exchange are not "currency" or circulating medium, because they can only be discharged by payment of money. Even if such an assertion were true, it would not affect the question in any way, but the assertion itself is wholly erroneous. It is not true that bills of exchange can only be discharged by payment in money. Bills of exchange to the amount of millions are daily discharged without any coin whatever, just in the same manner as cheques are. A bill of exchange, on the day it matures, becomes a cheque; a cheque is nothing but a bill of exchange payable to bearer on demand. Now, let us take the case of a wholesale dealer who accepts bills to a manufacturer, and draws bills upon retail dealers. When he opens a discount account with his banker, he brings the bills he draws upon his own customers, the retail dealers, and sells them to his banker. He also makes the bills drawn upon himself payable at his bankers, and the proceeds of the bills he sold are appropriated to the payment of the bills he has to meet. Now, he knows when the bills he has accepted fall due, and he takes care to sell some bills to his banker to meet them. The banker, as usual, buys these bills, by merely writing so many figures—so many "promises to pay"—to the credit of his customer. Now, if this banker is a member of the Clearing House, and the banker who presents his customer's acceptances for payment, is also a member of it, they are presented through the Clearing House, and fall into the mighty mass of transactions which are settled by its means, without any intervention of coin, or Bank notes.

Now, when we see that cheques are merely substitutes for Bank notes, that in every case where a cheque now passes, Bank notes would be required if cheques had not existed; when we also see that a bill of exchange on the day it is payable becomes

a cheque, which is equivalent to a Bank note, it follows very clearly that all the obligations interchanged at the Clearing House form an integral part of the circulating medium. Their being exchanged at the Clearing House can make no difference to what they would be if they were presented and paid by each banker, for they have all done their duty *before* they arrive at the Clearing House; they have caused commodities to circulate, perhaps many more times than once, before they come to be discharged.

In most country towns in England of any size similar exchanges are organized, and the differences settled by a draft on London; and in 1860 a clearing establishment was instituted in London for country bankers. All these institutions have the general tendency to constitute, as it were, all the different banks in the county one vast banking establishment to extinguish the credit created by commercial transactions, by mutual interchanges without the use of Bank notes or coin. What the economy of notes or coin may be by means of the present system of clearing, which is even yet far from complete, no one has the means of ascertaining. In the year 1839, when we may fairly say that the present banking system was in its very infancy, and there were only 29 private bankers in the Clearing House, the claims settled there amounted to £954,401,600 and these were discharged by means of £66,275,600 in Bank notes. At the present time the amount settled has multiplied many times: during the last year the amount which passed through the Clearing House was £5,359,272,000: and no notes or coin are required. But a consideration of the details of this system will impress the reader with the truth of what we have endeavoured to explain fully in a previous section, that a Debt is in all respects an article of commerce, or merchandize. In former times money was required to adjust the balances on unequal exchanges of *commodities;* in modern times, when commodities are almost universally circulated by means of Debts, and these Debts are themselves articles of commerce, money and notes are chiefly required to adjust the outstanding balances on *unequal* exchanges of DEBTS.

Section VI.

On Banks *of* Credit Foncier.

74. When after a long period of inactivity the energies of a people are suddenly turned in an industrial direction, they find innumerable enterprises which would be profitable, if only they possessed the means of setting them agoing. The quantity of money which was found sufficient for a non-industrial people, is now found to be wholly inadequate to the increased demands for it, and the only consequence can be, that if there be a greatly increased demand for the existing quantity of money, the rate of discount, or interest, will rise proportionably, and rise to such an extent as to preclude all possibility of profit from such enterprises, even if effected.

It has been invariably found, therefore, that whenever this takes place, there are abundant schemes set afloat for increasing the quantity of money. This was particularly the case after the restoration, in England, when men, weary of politics and polemics, began to turn their attention more to commerce.

Among fields of enterprise none appeared at that time more promising than agriculture. But, unfortunately, all the available specie was absorbed in commerce; none was to be had for agriculture, or, at least, except at such rates as to be a practical prohibition.

It was this real want that gave rise to the schemes of Asgill, Chamberlen, and others, for the purpose of turning the land into money, which were so rife at that period. Among all of them, John Law's has attained the greatest name. He perfectly well understood the powers of Credit, and he saw that Credit was an increase of the powers of money; but he saw that Credit was limited by Money, and his plan was to devise a scheme by which paper money should be created, which should maintain an equality of value with silver.

He supposed that if the land were mortgaged to the Government it might create paper money to the amount of the value in silver of the land, and that this paper money would circulate at par with silver.

This doctrine may seem to have some plausibility in it, and

has many modern admirers. But, nevertheless, whenever it has been tried in practice, it has uniformly been found to fail. This, however, is not the place to point out its error, nor to detail the practical examples of its failure.

Ten years, however, after the failure of Law's system in France, the Scottish Banks, by the admirable invention of Cash Credits, pushed Credit to the utmost extent of its legitimate limits, and realized all that was practicable in Law's scheme.

No one who understands the subject can fail to see the enormous advantages of paper when duly administered. But the great difficulty in all such cases is to determine what are the true limits of the issues of paper. That is, to what extent it may be issued and maintain an equality of value with silver. In fact, it is one of the profoundest problems in Economics, and of the most momentous consequence to the prosperity of the nation.

Seeing, then, that paper money directly based upon land was a failure, and that the invention of Cash Credits could not be carried out by the timid and narrow system of foreign banks, the question was how to divert Capital to the land, without creating paper money.

At the close of the seven years' war, the proprietors in Silesia found themselves in a state of inextricable embarrassment. The ruin and destruction caused by the war, and the low price of corn, caused by the general distress, made them unable to meet their engagements. Interest and commission rose to 13 per cent. They obtained a respite of three years to pay their debts. To alleviate the distress arising out of this state of matters, a Berlin merchant, named Büring, invented a system of Land Credit, which has been very extensively adopted in Germany, Russia, Poland, and lastly in France.

Proprietors of land can no doubt borrow money on mortgage; but in every country such transactions are attended with many inconveniences. They have many expensive formalities to undergo, such as investigation of title, &c. Moreover, the difficulties and expenses of transfer are usually very great, as each purchaser has to undergo the same investigation and expense. If the debtor fails to pay, the process of obtaining redress, or possession of the land, is usually very troublesome and expensive. The consequence of all these obstacles is, of

course, to raise greatly the terms on which money can be borrowed on mortgage.

The system of Government Funds suggested to Büring the idea of creating a similar species of land stock. The Government could usually borrow much cheaper than the landlords, because the title was sure and indisputable, and there was no impediment to the negotiability.

Büring, therefore, conceived the idea of substituting the joint guarantee of all the proprietors for that of individuals, and establishing a book in which this land stock should be registered and be transferable, and the dividends paid exactly in the same way as the public funds. The Credit, therefore, of the Association, was always interposed between the lenders and the borrowers. Those who bought this stock looked only to the Association for payment of their dividends, and the borrowers paid all interest, &c., to the Association, which took upon itself all questions of title and security. The whole of these obligations were turned into stock transferable in all respects like the public funds. Such is the general design of these Associations. It is plain that they avoid the rock of creating paper money, while they greatly facilitate the application of Capital to the land. They, in fact, do nothing more than turn mortgages into stock.

There are different methods of organizing such Associations, but we may say in a general way that the system was introduced into Silesia in 1770; the March of Brandenburg, in 1771; Pomerania, in 1781; Hamburg, in 1782; West Prussia, in 1787; East Prussia, in 1788; Luneburg, in 1791; Esthonia and Livonia, in 1803; Schleswick-Holstein, in 1811; Mecklenburg, in 1818; Posen, in 1822; Poland, in 1825; Kalenberg, Grubenhagen, and Hildesheim, in 1826; Wurtemberg, in 1827; Hesse-Cassel, in 1832; Westphalia, in 1835; Gallicia, in 1841; Hanover, in 1842; and Saxony, in 1844.

These Associations are divided into two classes.

The first are private associations, and these again are divided into companies founded by the borrowers, and financial companies founded by the lenders; the second are associations founded by the State or the provincial authorities.

M. Josseau has published a work [1] giving an account of these

[1] *Traité du Crédit Foncier.*

institutions to which we must refer those whose wish complete details about them. We will only mentioned one.

The *Société de Pomerania*, called Landschaft, or *Landschaft Casse*, founded in 1781, was an advance of 200,000 thalers from Frederich II., and with revised statutes, in 1846.

The Company creates negotiable obligations at $3\frac{1}{2}$ per cent. for 100 thalers and upwards, and $3\frac{1}{3}$ per cent. below, payable half-yearly.

The proprietor pays 4 per cent. interest, and $\frac{1}{6}$ per cent. for expenses of management.

The holder of the obligations has, as security for their payment, the entire capital of the Company, the land specially mortgaged for them, and the liability of all the proprietors of the circle, and, if that should fail, all the proprietors of Pomerania. There is no priority of preference among the obligations. The holder may take away the negotiability of the notes, which can only be restored by a Court. The holder cannot demand repayment, but the Company may pay off their bonds. These bonds can only be issued on property in the power of the Company.

The head office of the Company is at Stettin. A royal commissioner has the surveillance of its operations, and presides at the general meetings. The administration consists of a director and two assistants. There are four departments in the country, with a director at their head, and several branches to each. These branches have to make all the necessary inquiries concerning the property upon which loans are to be advanced.

The borrowers receive the Company's bonds at the exchange of the day, in sums of 200 or 1,000 thalers. For one-tenth of the loan they may have 100, 50, and 25 thaler notes. They may pay either in money, or in the Company's bonds, which they may purchase from the public. Overdue coupons are also received as ready money. Thus, again shewing that the Release of a Debt is equivalent to the payment of money, or $- \times - = + \times +$. A debtor may at any time pay off his debt, on giving 8 months' notice before the payment of the coupons, and paying a deposit of 5 per cent. The Company may also redeem its bonds on giving 6 months' notice. In 1837, its bonds in circulation amounted to 55,602,844 dollars, and they were above par.

Such is a general outline of their constitution. The various Banks in different countries differ in some of their details. But

it would occupy too much space to be given here. We have elsewhere[1] given an account of them taken from M. Josseau's work.

These institutions have had the most remarkable effects in promoting the agriculture of the countries they have been founded in. Their obligations have maintained through all crises—monetary, war, and revolutionary—a steadiness of value, far beyond any other public securities whatever, either government or commercial. M. Josseau states[2] that in a population of 27,827,990 the negotiable *Lettres de Gage*, or *Pfandbriefe*, amount to about 540,423,158 francs. In 1848, when all public securities fell enormously, owing to the revolution, the Pfandbriefe kept their value better than anything else. The Prussian funds fell to 69, the shares of the Bank of Prussia to 63, and the Railroad shares to 30 to 90 per cent., whereas the Land Credit bonds, producing 3½ per cent. interest, in Silesia and Pomerania stood at 93 in West Prussia at 83, and in East Prussia at 96. In 1850, those producing 4 per cent. were at 102 in Posen, and at 103 in Mecklenburg.

[1] *Dictionary of Political Economy, Art. Credit Foncier.*

[2] *Traité du Crédit Foncier, Introd. p.* xxiv.

CHAPTER VIII.

ON THE SELF-CONTRADICTIONS OF J. B. SAY AND MR. J. S. MILL ON THE SUBJECT OF CREDIT.

1. Sorely against our will, when we are anxious to press on to the exposition of the science, we are compelled to delay our progress to shew the extraordinary self-contradictions of J. B. Say and Mr. J. S. Mill on the subject of Credit. We have already been detained at considerable length in the preceding chapter, in pointing out various erroneous notions on Credit, and we would fain pass on, but we cannot; the subject is too important, and the two writers we have mentioned have done too much mischief to be passed over.

Up to the beginning of the present century, we may say that, with the exception of one eminent writer with whom the misconception originated which has done so much harm, there was no difference of opinion on the subject of Credit. All writers previously to that time, seeing that Credit in the form of Bills of Exchange and Bank Notes performed the same functions as money in circulating commodities, classed Credit under the title of Capital. But no one had worked out the Theory of the subject, or had demonstrated the true limits of Credit.

Every one knows, however, that in recent times the most unsparing ridicule has been poured on the doctrine that Credit is Capital. J. B. Say made the wonderful discovery that the whole world was under a delusion, and that, when all the world said that Credit is Capital, they were such dolts as to maintain that the same thing can be in two places at once!!

Turgot was the originator of the fallacy which has caused so much mischief. When he was at college, in 1749, and only 22 years of age, he began to reflect on Law's system of Paper Money, which had produced such a frightful catastrophe in France, 29 years before. A letter he addressed to the Abbé de Cicé [1] contains an expression which has been the key-note of a

[1] *Sur le papier supplée à la monnaie. Œuvres de Turgot, Vol. I., p. 94. Edit. Guillaumin.*

fallacy which, taken up by J. B. Say, has been sedulously propagated by many writers.

He says "In a word all Credit is a loan, and has an essential relation to its repayment." Here we see the first statement of that gross confusion of ideas on the subject of Credit, which is so prevalent at the present time. Preceding writers had always seen that credit is a species of property which might be bought and sold, and for that reason is called, *Pecunia*, *Merx*, Χρῆμα, Πρᾶγμα, in Roman Law. But Turgot makes Credit to be an *operation*. To say that Credit is *transfer*, is as gross a misconception of the nature of the thing as to say that a guinea is the *transfer* of a book! Turgot, rightly enough, says that every Credit implies a future repayment. That is true: Credit means the Right to a future payment. And it is precisely because this Right is exchangeable for some thing at a future period, that it has Value. Turgot's remark, therefore, that every Credit implies a future payment, though true, had nothing to do with the question; because as long as Law confined himself to Credit his Bank was magnificently successful, as we have shewn elsewhere.[1] It was not his system of Credit which produced the catastrophe, but his system of PAPER MONEY, which was not redeemable in money. Law perfectly well understood the limits of Credit; but he tried to devise a system of PAPER MONEY, over and above Paper CREDIT; and it was the system of Paper Money which produced the catastrophe, as we have shewn very fully in the article just referred to. Hence we see that Turgot's remark though true, wholly misses the mark.

On the SELF-CONTRADICTION *of* J. B. SAY *on the* SUBJECT *of* CREDIT.

2. J. B. Say, following up the erroneous notion of Turgot, invented the phrase which so many unthinking writers have echoed from that day to this, that those who consider Credit to be Capital maintain that the *same thing can be in two places at once!*

We shall find that all this confusion has arisen from Say never having thought out carefully the fundamental conceptions of the science, and his incredible self-contradiction on almost every

[1] *Dictionary of Political Economy, Art Banking in France*, § 486.

one. Say's name stands so high in the subject, and his doctrine has been chorussed by such a multitude of writers, and the matter is in itself of such really transcendant importance, that we are compelled to give some space to a thorough investigation of his views. We must therefore inquire into his notions of Wealth, Value, Capital, and Credit.

On J. B. SAY'S DEFINITION *of* WEALTH.

3. It is very commonly supposed that Say was the first writer to introduce immaterial products into Economics. This however we have shewn to be at error, as Smith expressly enumerates the "acquired and useful abilities of the inhabitants" as part of the Wealth of the Society. We have shewn that Smith admits Paper Credit to be Capital. Thus recognizing the existence of *Three* species of Wealth. Say does exactly the same, and he also enumerates several other species of Incorporeal Property.

Say defines Wealth thus[1] — "The exclusive possession which in the midst of a numerous society, clearly distinguishes the property of each person, causes this sort of thing, to be the only one to which in common language the name of WEALTH is given. . . . From this circumstance not only those things which are capable of satisfying directly the wants of man such as nature and society have made him, but the things which can only satisfy them indirectly by furnishing the means of procuring that which serves directly, as money, INSTRUMENTS OF CREDIT (*Titres de Créance*), the *Funds*, &c."

Again after speaking of things of Value such as the earth, metals, money, corn, stuffs, &c., he says[2]—"If one gives also the name of WEALTH to the Funds, Commercial Paper, (*effets de commerce*), it is clear &c."

Again he says[3]—"You see that Wealth does not depend on the kind of the things, nor upon their physical nature, but on a moral quality which each one calls their VALUE. Value alone transforms a thing into Wealth, in the sense in which this word is synonymous with *biens* or property. The Wealth which resides in anything, whether it be land, a horse, or a BILL OF EXCHANGE, is proportional to its value. When we speak of things being Wealth, we do not speak of other qualities which they can have; we only speak of their Value."

[1] *Cours, Pt.* 1. *ch.* 1. [2] *Traité, Bk.* 1., *ch.* 1. [3] *Cours, Pt.* 1, *ch.* 1.

Thus we have shewn most conclusively that J. B. Say makes the principle of Wealth to reside exclusively in Exchangeability, and he expressly enumerates *titres de créance*, and *effets de commerce*, that is Negotiable Paper, or Credit, as Wealth.

On Say's Definition *of* Value.

4. We shall find exactly the same incongruities in Say's notion of Value, as has been the ruin of so much modern Economics. He over and over again says that Value is something external to an object for which it can be exchanged, and then he repeatedly speaks of *Intrinsic* Value, without the least idea that these are contradictory conceptions.

To show this we can only quote a few passages out of many. Thus he says[1]—"The second circumstance to be remarked relating to the value of things, is the impossibility to appreciate its absolute magnitude. It is never anything but *comparative*. When I say that a house which I point out, is worth 50 thousand francs, I affirm nothing but that the value of this house is equal to the sum of 50 thousand francs; but what is the value of this sum? It is not a value existing by itself, and without a comparison. The value of a franc, of 50 thousand francs, is composed of all the things which one can buy for these different sums. If one can, in giving them in exchange, have a greater quantity of corn, sugar, &c., they have greater value relatively to these other things; if one can have less, they have less value; because the value of a sum of money, like all other values, is measured by the quantity of things which one can get in exchange.

"The idea of value resembles the idea of distance. We cannot speak of the distance of an object, without making mention of another object from which the first finds itself at a certain distance. In the same way, the idea of the Value of an object, always supposes a relation with the value of something else."

Again in the same chapter—"These same principles shew that gold, silver, and money, are not sought for themselves, and are only of the value of what they can buy."

We need not overload our pages with more quotations. These are sufficient to shew that Say fully admits that the *Value* of a thing is what it will exchange for; if it will exchange for more,

[1] *Cours*, *Pt.* 1, *ch.* 1.

it has greater value; if it will exchange for less, it has less value; and if it will exchange for nothing, it has no value.

Moreover, Say repeatedly acknowledges that Value is a quality of the mind; and that it is the mind of man only that confers Value. Thus, he says[1]—"Nevertheless, Value is purely a *Moral Quality*, and which appears to depend upon the fugitive and changeable will of men."

So also—"In order that a Value may be Wealth, this value must be recognized not by the possessor only, but by every other person."

Here Say admits that Value does not depend upon a single mind, but upon several. He goes too far in saying every one, as *two* minds are necessary and sufficient to constitute value.

So also he says[2]—"The Value which men give to things. . . It is always true that if men attach Value to a thing."

Now we have shewn in these passages that Say clearly admits that Value is not an absolute quality of a thing; that it is external to itself; that it is the thing for which it can be exchanged; and that it originates in the *mind* of man. Now after all these admissions, what can be more contradictory or absurd than to speak of *Intrinsic* Value?

On SAY'S DEFINITION *of* CAPITAL.

5. We have now to lay before our readers the extraordinary self-contradictions of Say on the subject of Capital.

First of all, Say says that *Immaterial and Incorporeal Quantities are* NO *part of National Wealth.*

He says[3]—"The nature of Capitals, the nature of their functions shew us very important truths. One of them is that Productive Capitals do not consist in fictitious and conventional values (?), but only in real and *intrinsic* (!) values, which their possessors judge convenient to devote to production. In fact one cannot buy productive services except with material objects having an *intrinsic* (!) value. We cannot amass as Capital, and transmit to another person anything but values incorporated in material objects."

[1] *Cours, Considerations Générales.* [2] *Traité, p.* 57.
[3] *Cours, Pt. I., ch.* 10.

Again [1]—"From the nature of immaterial products, it follows that we cannot accumulate them, and that they do not serve to augment the national capital. A nation in which there is found a crowd of musicians, of priests, of *employés*, may be a nation very much amused, well taught, and admirably well administered, but that is all. Its capital does not receive from the labours of these working men any direct increase, because their products are consumed immediately they are created."

We have shewn, at p. 266, how completely Say has demolished this last argument.

Again [2]—"All transmissible capital is composed of *material products*, for nothing can pass from hand to hand but visible matter."

6. We have now to shew that Say says that *Immaterial and Incorporeal Capital is part of National Wealth.*

He says [3]—"Since it has been proved that Immaterial Property, that talents, and acquired personal qualities form an integral portion of social wealth."

Again [4]—"We must include among Capitals many *biens*, which have a Value although they are not material. The *Practice* of a Lawyer, or a Notary, the *Goodwill* of a shop, the reputation of a Sign, the *Title* of a periodical work, are incontestably wealth: we may sell them, and buy them, and make them the subject of a contract, and *they are* CAPITALS, because they are the fruits of accumulated labour. A Lawyer by the wisdom of his advice, by his assiduity and other qualities, has made the public conceive a good opinion of his chambers; this good opinion gives him the right to larger fees: this increase of profit is the revenue of a CAPITAL, called *reputation:* and this CAPITAL is the fruit of the Labour and care which the lawyer has taken during many years."

In a note to one of the passages previously cited, he says—"There are Capitals which are not incorporated in material things, as the practice of a notary, or a commercial enterprise: but this portion of *Capital* is a very real Value."

Again—"The only immaterial Capitals which I knew of are the Practice, the Goodwill of a shop, a profession, of a newspaper; one can alienate, one can sell, a capital of this species."

[1] *Traité, Bk.* 1, *ch.* 13. [2] *Definitions, at the end of the Traité.*
[3] *Cours, Considérations Générales.* [4] *Cours, Part.* iv., *c.* 5.

So again[1]—"Without a classification of things possessed embraces them all in making a valuation of the wealth of a nation, a community, a private person, we are never certain of making them complete.

"Our property comprising our Wealth, whatever it is, comprises our natural qualities, as well as our social riches."

And after going through several descriptions of personal talents, he says—"What I have said is sufficient, I think, to convince you that industrial faculties are Property of the same kind as all others; and it is only in regarding them as equal to all others that we obtain all the social advantages attached to the Right of Property. For the same reason this kind of property although it is difficult to be expressed in figures, forms nevertheless part of the general wealth of a nation. A nation where industrial capacities are more numerous and more eminent than elsewhere is a more wealthy nation."

We simply lay before our readers the above extracts, containing the most manifest self-contradictions as to what is to be included under the name and nature of Capital.

When he comes to enumerate what things are Capital, he says[2]—"This is why from the moment that this value resides in objects employed in a productive operation I name it CAPITAL, whatever be the objects in which it resides."

Again[3]—"These capital values may consist of the *Public Funds*, *Commercial Paper*, coffee berries, or any other merchandize which he will sell."

Again[4]—"The form under which Capital Value presents itself makes no difference." Thus we see that under the titles of Wealth and Capital, Say expressly includes *titres de créance*, and *effets de commerce*, which are Credit; hence Say has, as we have already shewn, distinctly said that CREDIT *is* CAPITAL.

SAY'S OPINION *on* INSTRUMENTS *of* CREDIT.

7. After having shewn so distinctly that Say, in accordance with Smith and all previous writers, enumerates Credit under the title of Capital, we may wonder how he has proved that those who say so, say that the same thing can be in two places at once.

[1] *Cours, Pt.* iv., *ch.* 3.
[2] *Ibid., p.* 131.
[3] *Cours, Pt. I., ch.* 5.
[4] *Ibid., p.* 135.

After his extraordinary self-contradictions on the subject of Capital, our readers may be prepared to find that it all proceeds from his own confusion of ideas.

He says [1]—"A bill on demand, or a bill of exchange, are obligations contracted to pay, or cause to be paid, a sum either at another time, or in another place.

"The right attached to this order (although its value is not demandable at the time or the place where one is) gives it nevertheless a PRESENT VALUE, more or less great. Thus a bill for 100 francs, payable at Paris in two months, may be negotiated or sold for the price of 99 francs; a bill for a similar sum payable at Marseilles at the same time, will be worth at Paris perhaps 98 francs.

"Hence a bill of exchange by virtue of its future value, has a PRESENT VALUE, it can be employed instead of money in every species of purchase, so that the greater part of the great commercial transactions, are effected by bills of exchange."

Again he says [2]—"There is nevertheless an important observation to make relating to the representative signs of money. It is that they are capable of rendering a service exactly similar to the money they represent. If any one signs an obligation by which he binds himself to deliver at a fixed period, a cloak made in such a fashion, this promise, although it is in some sort a sign, or pledge, of the possession of the cloak, cannot take its place: because a sheet of paper does not protect from cold, like a cloak: whilst the signs which represent money, can replace it completely, and render all the services which it can. In fact the qualities which make a bag of money serve us in exchanges, can be found in a bill. These qualities you will remember are—

"First in the Value which it has. One can give a bill exactly the same value as to a sum of money: in giving the bearer the right to receive the sum, so as to take away from him all doubt as to the payment; it is thus that a bank note can circulate ten years in preserving a value of a thousand francs without being paid, only because one believes that he will be, the moment he pleases."

Now having laid before our readers these explicit declarations that a bill, which is Credit, may perform all the functions of

[1] *Traité, Bk.* 1, *ch.* 30. [2] *Cours, Pt. III, Div.* 3, *ch.* 27.

money we will quote the passage which has been the foundation of so much misconception.

He says[1]—"It is sometimes thought that Credit multiplies Capital. This error which is found frequently reproduced in a crowd of works, of which some are written professedly on Political Economy, supposes an absolute ignorance of the nature and functions of Capitals. *A capital is always a very real value, fixed in a matter (! !); because immaterial products are not susceptible of accumulation (!) and a material product cannot be in two places at once, and serve two persons at the same time (! !).* The constructions, the machines, the provisions, the merchandize which compose my Capital, may be the amount of the values I have borrowed; in this case, I carry on my industry with a capital which does not belong to me, and which I hire; but certainly the capital which I employ is not employed by another. He who lends it to me is debarred from the power of working it elsewhere. A hundred persons can merit the same confidence as me; but this Credit, this confidence merited does not multiply the sum of disposable capitals; it only causes less capital to be kept without use."

The utter confusion of ideas is here manifest; Say in this passage evidently considers the Credit to be the *thing lent.* Whereas the Credit is the *titre de créance*, which is created to *transfer* the thing.

He also says[2]—"The manufacturer who buys on credit raw materials, borrows from the seller the value of this merchandize for the time of the Credit which he gives him: and this value which he lends him is furnished in merchandise, which are material values.

"Hence if one can only borrow and lend Capital in material objects (!) what becomes of this maxim that Credit multiplies Capitals? My Credit can cause me to dispose of a material value which a capitalist has placed in reserve; but if he lends it to me, he remains deprived of it; he cannot lend it to another person at the same time; the manufacturer who uses this value, who consumes it, to accomplish a productive operation, prevents another manufacturer employing it in his own."

The misconception on which the whole of this passage is founded is plain, and Say's self-contradictions on the subject of

[1] *Traité B.* ii., *c.* 8. [2] *Cours, Pt.*, 1 *ch.* 9.

capital are also plain. He says in the passages last quoted, that Capital is always a very real value fixed in a matter! Why, he himself has told us that there is Incorporeal Capital *not* fixed in any matter whatever, such as Copyright, &c. He then says that Immaterial products are not susceptible of accumulation! What! cannot a man be possessed of £100,000 of Funded property? and of the Copyrights of Books, and of a number of Bills of Exchange? He then says that a material product cannot be in two places at once. But who said it could—except Sir Boyle Roche, the famous Hibernian,—and even he limited this power to birds? Neither, however, can an immaterial product be in two places at once, that we are aware of; so that it makes not much difference as to its being in two places at once, whether the product is material or immaterial. He says that material merchandise lent cannot serve two persons at once. No one says it could; but that has nothing to do with the question. Because it is not the merchandise which is the Credit, but the *Debt created in exchange for the merchandise*, which is valuable property in itself, and may be used to buy other articles, and therefore is productive capital, or else it may be discounted by a banker, and the proceeds used in the same manner.

Now when it is clearly understood that the Credit is the Debt, or Right, created which is recorded on paper, Say himself says it is Capital. He says[1]—"Every private person can sign an ordinary bill, and give it in payment of merchandise, provided that the seller consents to receive it as if it were money. This seller in his turn if he is the buyer of other merchandise, can give the same bill in payment. The second acquirer can pass it to a third with the same object. There is an obligation which circulates: it serves him who wishes to sell; it serves him who wishes to buy: it fills the office of a sum of money.

"The value of a sign depends on the value of the thing signified: but in order that this value may be exactly as great as that of the thing of which it is the pledge, the payment of the bill must not only be certain, but demandable on the instant. . . .

"If bills of credit could replace completely metallic money, it is evident that a bank of circulation veritably augments the sum of national Wealth; because in this case the metallic wealth be

[1] *Cours, Pt. III., ch.* 18.

coming superfluous as an agent of circulation, and nevertheless preserving its own value, becomes disposable, and can serve other purposes. But how does this substitution take place? What are its limits? What classes of society make their profit of the interest of the *new funds added to the Capital of the nation?*

"According as a bank issues its notes, and the public consents to receive them on the same footing as metallic money, the number of monetary units increases . . . . . .

"We must not, however, think that the value withdrawn from the sum of money, and added to the sum of capital-merchandize, equals the sum of notes issued. These only represent money, when they can always be paid on demand; and for that, the bank is obliged to keep in its coffers, and consequently to withdraw from circulation, a certain sum of money. If, suppose, it issues 100 millions of notes, it will withdraw, perhaps, 40 millions in specie, which it will put in reserve, to meet the payments which may be demanded of it. Therefore if it adds to the quantity of money in circulation 100 millions, and if it withdraws 40 millions from circulation, it is as if it added only 60.

"We now wish to learn what class of society enjoys the use of this NEW CAPITAL."

Say then goes on to explain how this *New Capital* is employed, and who reaps the profit of it.

We need say no more upon this weary subject. The whole misconception is now cleared up; and we have shewn most clearly that Say expressly declares the Bank Notes, which are Credit, to be Capital.

On the Self-contradiction of MR. J. S. MILL *on the subject of Credit.*

8. Turgot was the writer, as we have shown above, who started the erroneous notion that Credit is the *transfer* of something; and J. B. Say extended the error by saying that Credit could not be Capital, because the same thing cannot be in two places at once. These two sentences have been repeated by a multitude of unthinking writers in France and England from that day to this. The number of writers who have reiterated these absurdities is so great that we have no room to notice them,

especially as we have shewn the misconceptions and self-contradictions of Turgot and Say who were the sources of the error. We can only notice Mr. J. S. Mill who has joined in the sneer, and see whether he is more consistent with himself than Say.

Let us first examine Mr. Mill's definition of Wealth. He says[1]—"Everything forms therefore a part of Wealth which has a power of purchasing." Again he says of Credit[2]—"For credit though it is not productive power, is *purchasing power*." "The Credit which we are now called upon to consider, *as a distinct purchasing power*, independent of money."

Now, if everything is Wealth which has a power of purchasing—and if Credit be purchasing power—why of course Credit is Wealth! That is a Syllogism from which there is no escape.

Thus we have shewn that Credit is expressly included under Mr. Mill's definition of wealth: we have already shewn in a previous chapter[3], Mr. Mill's inconsistencies in his definition of Wealth.

Let us now turn to Mr. Mill's definition of Capital. He says[4]—"Capital, by persons wholly unused to reflect on the subject, is supposed to be synonymous with money. To expose this misapprehension, would be to repeat what has been said in the introductory chapter. Money is no more synonymous with capital than it is with wealth. Money cannot in itself perform any part of the office of capital, since it can afford no assistance to *production*. To do this it must be exchanged for other things; *and anything which is susceptible of being exchanged for other things, is capable of contributing to production in the same degree*."

Now, deferring for the present enquiring what the meaning of production is, we see that Mr. Mill says that money conduces to production by being exchanged for other things, and he says that ANYTHING which may be exchanged like money may conduce to production in the same way. Now if Bank Notes, and Bills of Exchange can be exchanged for other things they may be productive Capital in the same way that money is; by Mr. Mill's own admission.

Thus we see that Mr. Mill has already, by implication, admitted that Credit may be Capital. And this doctrine we shall

[1] *Preliminary Remarks.*
[2] *Ante, p.* 147.
[3] *Book* iii., *ch.* 2, § 3.
[4] *Bk. i., ch.* 4.

find he still more explicitly states when he speaks of credit itself, B. iii., *c.* xi., is headed, "Of Credit, as a substitute for money." Now, we observe that if one thing is to be a substitute for another, it must be of the same general nature. Not so high, or excellent in degree, perhaps, but still it must be of the same kind. Things of totally different natures cannot be substituted for each other. Thus, for instance, if a man cannot get XXX ale, he may have to put up with swipes, as a substitute. But a pair of shoes could never be a *substitute* for a glass of ale. If, therefore, credit is to be a substitute for money, it must be of the same general nature as money. Now money, as every one knows, is separate and independent exchangeable property, and consequently, Credit must be so also. Money, if used in a certain way, is capital; Credit must also be capable of being used as capital as well. If money, therefore, is capable of being productive capital, Credit must be so likewise.

In B. iii., c. 11, § 5, he says, that a form "in which Credit is employed as a substitute for currency is that of promissory notes," and also—"The convenience of this mode of (as it were) coining Credit." In § 6, he says, another mode "of making Credit answer the purposes of money, by which, when carried far enough, money may be very completely superseded, consists in making payments by cheques." Here we see that he expressly calls the Promissory Note and the Cheque, the Credit.

In the next chapter, xii., we shall see that he expressly allows that these Instruments of Credit are independent exchangeable property, and valuable things. He says, § 1:—"An *order or note of hand, or bill payable at sight*, for an ounce of gold, while the credit is unimpaired, is worth neither more nor less than the gold itself;" and—"But we have now found that there are other things, such as bank notes, bills of exchange, and cheques, which circulate as money, and perform ALL the functions of it." Now here is an explicit declaration that Credit performs ALL the functions of money, and, therefore, as one of the functions of money is to be *productive Capital*, it follows that Credit may also be productive Capital.

In § 2 of the same chapter, he says, that a man "may make purchases with money which he only expects to have, or even only pretends to expect. He may obtain goods in return for his acceptance payable at a future time, or on his note of hand, or

on a simply book credit, that is, on a mere promise pay. All these purchases have exactly the same effect on price, as if they were made with ready money. The amount of purchasing power which a person can exercise, is composed of all the money in his possession, and due to him, AND OF ALL HIS CREDIT." "He creates a demand for the article to the full amount of his money AND CREDIT *taken together*, and raises the price proportionably to both." In § 3, he says, :—"The inclination of the mercantile public to increase their demand for commodities by making use of all or much of their credit as a purchasing power." In § 4 :—"The banker's credit with the public at large, coined into notes, as bullion is coined into pieces of money to make it portable and divisible, is *so much purchasing power* SUPERADDED, in the hands of every successive holder, to that which he may derive from his own credit. * * Credit, in short, has exactly the same *purchasing power* with money; and, as money tells upon prices not simply in proportion to its amount, but to its amount multiplied by the number of times it changes hands, so also does Credit; and Credit, transferable from hand to hand, is in that proportion more potent than Credit which only performs one purchase."

In § 5, he says :—"Since, then, Credit in the *form* of *bank notes* is a more potent instrument for raising prices than book Credits— * * If we consider the proportion which the utmost increase of bank notes in a period of speculation bears, I do not say to the whole mass of credit in the country, but to the bills of exchange alone, the average amount of bills in existence at any one time is supposed considerably to exceed a hundred millions sterling. The Bank Note circulation of Great Britain and Ireland is less than thirty-five millions, and the increase in speculative periods, at most, two or three." And, as a note to this passage, Mr. Mill gives a table of the bills supposed to be created in several years, the last of which is 1839, when the bills supposed to be created amounted to £528,493,842. In *c.* xiii., he says:—"After experience had shewn that pieces of paper of no intrinsic value, by merely bearing upon them the written profession of being equivalent to a certain number of francs, dollars, or pounds, could be made to circulate as such, and to produce all the benefit to the issuers which could have been produced by the coins which they purported to represent—"

Now, from these extracts from Mr. Mill's work, our readers will clearly perceive that he expressly asserts, as positively as it is possible that language can do, that Credit is independent, exchangeable property, like any other. That it is cumulative property to money and commodities, and that it may be dealt with precisely in the same manner as money, and may produce all the effects of money. Now, as this Credit is nothing but circulating debts, it follows clearly from Mr. Mill's own admission, that DEBTS are WEALTH. All this is in exact accordance with the doctrines laid down in the preceding sections of this treatise.

In B. iii., *c.* xxii., he is equally explicit:—"The same effects which would thus arise from the discovery of a treasure accompany the process by which bank notes, or any of the other substitutes for money, take the place of the precious metals."—"The value saved to the community by thus dispensing with metallic money is a clear gain to those who provide the substitute. They have the use of 20 millions of circulating medium, which have cost them only the expense of an engraver's plate. If they employ this accession to their fortunes as PRODUCTIVE CAPITAL, the produce of the country is increased and the community benefited as much as by any *other* CAPITAL of equal amount. * * When paper currency is supplied, as in our own country, by bankers and banking companies, the amount is almost wholly turned into PRODUCTIVE CAPITAL * * A banker's profession being that of a money lender, his issue of NOTES is a simple extension of his ordinary occupation. He lends the amount to farmers, manufacturers, or dealers, who employ it in their several businesses. So employed, it yields, like any *other* CAPITAL, wages of labor, and profits of stock. The profit is shared between the banker, who receives interest. and a succession of borrowers, mostly for short periods, who, after paying the interest, gain a profit in addition, or a convenience equivalent to profit. The CAPITAL itself, in the long run, becomes entirely wages, and, when replaced by the sale of the produce, becomes wages again; thus affording a perpetual fund of the value of 20 millions for the maintenance of productive labour, and increasing the annual produce of the country by all that can be produced through means of a CAPITAL of that value."

In a note to Book iii., *c.* 11, § 1, he says—"Now an effect of

this latter character naturally attends some extensions of *Credit*, especially when taking place in the *form* of *bank notes*, or other instruments of exchange. The additional *bank notes* are in ordinary course first issued to producers or dealers to be employed as CAPITAL."

Thus our readers will perceive, from the former extracts that we laid before them, that Mr. Mill expressly states that Credit is independent, exchangeable property, whether embodied in the forms of Notes, Bills, Bank debts, or any other form, which was capable of performing all the functions of money, and therefore, by implication, capable of being employed as capital. But in the last preceding extracts he expressly calls bank notes—which are Credit—PRODUCTIVE CAPITAL.

We think we have shewn our readers as clearly as it can be done, that Mr. Mill asserts that Credit is Capital. And yet will they believe that he not only denies that Credit is Capital, but sneers at the imbecility of those who think it is!

In B. iii., *c.* xix., which we have already quoted from, the heading of the chapter is, as we said—"Of Credit, as a substitute for money,"—which clearly affirms that Credit is exchangeable property like money, he says:—"The functions of Credit have been a subject of as much misunderstanding, and as much confusion of ideas, as any single topic in Political Economy.

"As a specimen of the confused notions entertained respecting the nature of Credit, we may advert to the exaggerated language so often used respecting its national importance. Credit has a great, but not, as many people seem to suppose, a magical power; it cannot make something out of nothing. [Who said it could?] *How often is an extension of Credit talked of as equivalent to a creation of Capital, or as if Credit actually were capital!!!* [Why! who has said more distinctly than Mr. Mill himself that Credit is Capital? The very object of the whole of the preceding extracts is to shew that Credit is Capital!] It seems strange that there should be any need to point out that *credit being only the permission to use the capital of another person!!* the means of production cannot be increased by it, but only *transferred.* If the borrower's means of production, and of employing labour are *increased* by the credit given him, the lenders are as much *diminished.* The

same sum cannot be used as capital, both by the owner and also by the person to whom it is lent, it cannot supply its full value as wages, tools, and materials, to two sets of labourers at once. It is true that the Capital which A has borrowed from B, and makes use of in his business, still forms part of the wealth of B, for other purposes; he can enter into engagements in reliance on it, and can even borrow, when needful, an equivalent sum on the security of it; so that, to a superficial eye, it might seem as if both B and A had the use of it at once. But the smallest consideration will shew that when B has parted with his capital to A, the use of it as capital rests with A alone, and that B has no other service from it than in so far as his ultimate claim upon serves him to obtain another capital from a third person C. All capital (not his own) of which any person has really the use, is and must be, so much subtracted from some one else.

"But though Credit is never anything more than a TRANSFER *of capital from hand to hand.*"

Our readers cannot fail to see the astonishing confusion of ideas, on the subject of Credit, in the above extracts. In the first set, Mr. Mill sees clearly that Credit is the *Promise to pay*, which he over and over again says is independent, exchangeable property, of the value of money, which may be used in all respects like money, and perform all its functions. And therefore, it may be Capital as well as money.

Mr. Mill says that the Capital (*i. e.*, the goods) which A has sold on credit to B, are so much substracted from his property, and cannot be used by him as well as by B. But he wholly forgets that, in exchange for those goods, A receives B's "promise to pay," which is a debt, and, in fact, is *the* CREDIT. And this debt is exchangeable property, with which he can either purchase new goods to replace those he has sold to B, or he can sell it to his banker, and receive a bank Credit, with which he can purchase fresh goods, just the same as he could with money.

In the second extract Mr. Mill has changed his conception of Credit from being a *Promise* to pay, or a Debt, to its being the *Transfer of Capital!!*

Now, we ask—Is a Bank Note the *Transfer* of a commodity? Is a guinea the sale of a book? Is a piece of independent property the transfer of something else? Is a table the *transfer*

of a chair? Is an independent quantity of any sort whatever an *operation?*

Mr. Mill informs us that Credit cannot make something out of nothing? Who said it could. Can a guinea make something out of nothing? It is not Credit that makes something out of nothing; but it is Credit itself which is a valuable property, which is created out of nothing by the consent of the wills of persons, and which, by the reiterated acknowledgments of Say and Mill, is capable of performing all the functions of money. Now, money becomes Capital, by their own admission, by being exchanged for other things, or by circulating other things. Credit may be Capital in precisely the same way.

Moreover, we see how completely Mr. Mill is in error when he says that Credit is never anything more than the transfer of Capital. It is wholly untrue that Credit is always created in exchange for commodities. As we have shewn in the preceding section, all profitable banking business consists in buying debts by creating other debts. That is, Credit is created to purchase Credit.

After this exposition, our readers will, perhaps, think that Mr. Mill is not exactly the person to sneer at others for their confused notions about Credit, though his own work is a striking example of the misunderstanding and confusion of ideas which he says prevail upon the subject. And many may wonder, perhaps, at a logician who is unable to perceive the difference between an independent quantity and a sale of goods.

9. We hope that we have now brought this weary controversy to an end for ever; and we may just say a few words by way of a summary.

There is no method so effective for exterminating false conceptions, as bringing them into sharp and close contrast with true ones. We shall therefore place in array for summary execution, the false notions of Credit which have bewildered and misled writers. Thus—

Credit is NOT the *transfer* of a thing.
Credit is NOT the *thing lent.*
Credit is NOT *money owed.*
Credit is NOT a *title to any specific goods.*
Credit is NOT a *subtraction* from other property.

These are the pestilent *Idola fori*, which have infested the subject, and which must be exterminated: they are the visionary spectres which vanish at the break of day.

What Credit really is, is this—When goods or money are bought "on Credit," a contract, or Obligation, is created, consisting of a *Right to Demand* and a *Duty to Pay*. In Roman Law the loan of money, or *Mutuum*, was a SALE in the solemn form of the *æs et libra*, and, as that distinguished jurist M. Ortolan says[1], the Obligation was the *Price* of the money. So when a banker buys money from his customer, the Credit created in his books is the *Price* of the money. It is the *Jus Obligationis*, or *Right to Demand*, which, in Legal, Commercial and Economical language, is called CREDIT. And when this Credit, or Right, is recorded on paper in the form of a Bank Note, or Bill of Exchange, it may be bought and sold like any other chattel. Hence in Roman Law it was classed under "*Res*," "*Bonum*," "*Pecunia*," "*Merx*," "Χρῆμα," "Πρᾶγμα:" and in French Law under "*Bien*," or "*Chose:*" and in English Law under "*Goods and Chattels*," And when this is clearly understood we have seen that both J. B. Say and Mr. Mill expressly declare that CREDIT is PRODUCTIVE CAPITAL. The whole cause of the confusion in these two writers is plain: the *Idolon* which misled Say was that credit is the *thing lent:* a mistake he had no right to make; for *Crédit* is synonymous with *Créance* in French: the *Idolon* which has misled Mr. Mill is that Credit is the *transfer* of a thing: a mistake which he had no right to make; because he has said over and over again that Credit is *purchasing power*, and Bank Notes and Bills of Exchange are forms of Credit. Now "purchasing power" and Bills and Notes are certainly not the *transfer* of a thing. Hence, when these false notions, or *Idola*, are expelled, and the true notion, or the *Idea*, distinctly grasped, all obscurity is removed from the subject; and by the unanimous consent of all writers, and by none more so than by Say and Mr. Mill, it is clearly seen that Credit is Productive Capital. The real practical problems are to determine what are its true *limits*, and what is the true method of *controlling* it.

So also a Debt is not *Money owed*, as Peacock and many others suppose; it is the abstract personal *Duty to Pay* money.

[1] *Explication Historique des Instituts, Liv.* iii., *ch.* 13.

This is most clearly set forth in the Pandects[1]—"The essence of an obligation is not that it should cause any specific *thing* to be ours; but that it should bind some *person* to give us something." And thus the *Duty to pay* subsists quite irrespective of the fact that the Debtor has, or has not, any money to discharge it.

Every one knows the ridicule that was long showered on mathematicians for speaking of *quantities less than nothing:* and it all arose from their not clearly explaining their meaning; or rather from their not having clear conceptions of the Theory of Signs. So in a similar way, it is the commonest expression possible for a person who is in debt to say that he is *worse than nothing*; and it is very easily explained; for it obviously means that he has no RIGHT, but is under a DUTY.

It is a somewhat curious coincidence that the early Algebraists called Negative Roots, *fictitious;* and it is a very common expression among writers to call Paper Credit, *fictitious* Capital. In both cases *Negative* and *Fictitious* Quantities are shewn to be Real Quantities, but inverse or opposite to Positive Quantities, or Money.

There can be no more apt or appropriate expression than to call Credit, Negative Capital. For we have shewn that the true definition of Capital is any Economic Quantity used for the purpose of profit; and Senior says that all Economists are agreed that *whatever gives a profit is Capital.*

Now a man may trade with his Money *and* his Credit: his total purchasing power is all his Money *and* all his Credit.

If he trades with his money, he parts with a Right: if he trades with his Credit, he creates a Right *against* himself, or he incurs a Duty.

The first proceeds of his speculation must therefore either *Replace* his *Right*, or *Discharge* his *Duty.*

Whatever remains above that in either case is his PROFIT: and supposing that there is a profit, the Money and Credit have been equally CAPITAL to him, because they have equally given a Profit.

But as all the expressions are *reversed* when Credit is used instead of Money, it manifestly follows that if Money is Positive Capital, Credit is Negative Capital.

[1] *Digest*, xliv., 7 : 3.

10. Sir Charles Lyell says in one of his works that when a strange proposition is published, the world first screams out that it is false: it is then said to be contrary to religion: and lastly that every one knew it already.

When, years ago, we said in a former work that Credit is Capital, there was a shout of derision by many writers in England and France: Whately thought it necessary to enter into a long argument to prove to the Dons at Oxford that an Economist is not necessarily an Atheist: and now we have shewn clearly that every one knew already that Credit is Capital.

CHAPTER IX.

ON VALUE AS DEPENDENT ON "QUANTITY OF LABOUR" AND "COST OF PRODUCTION."

On Value as Dependent on Quantity of Labour.

1. Although we have no positive proof of the fact, we have a very strong conviction that the principal object of Adam Smith in writing the *Wealth of Nations* was to overthrow the doctrine of the Physiocrates that Labour (other than agricultural) and Commerce do not enrich a nation.

It is indeed sometimes supposed that Smith was the father of Political Economy and of Free Trade. But the narrative given in the preceding part of this work, shews that such ideas only proceed from most inaccurate knowledge. The fact is that in Political Economy, as in the early stages of nearly every other science, England was far in arrear of France and Italy. It is said that while Professor at Glasgow, Smith advocated Free Trade doctrines. It is very probable that he did so; but as his lectures were never published, his opinions could only have been known to a very small number of persons, and certainly he produced no effect on the public, while there. The fact is that at this period the minds of the most enlightened persons in France, Spain, Italy, and England were strongly interested in Economic subjects, and there was a general reaction throughout Europe against the detestable system of commercial restrictions which at that period weighed down the energies of every nation. The doctrines of the Physiocrates demanding absolute Free Trade as one of the fundamental rights of mankind were published in 1756, twenty years before the *Wealth of Nations;* Genovesi and Verri in Italy, and Campomanes in Spain, were equally ardent Free Traders. Turgot, the great Free Trader, was appointed Minister in 1774, and how could all these owe anything to the *Wealth of Nations*, which was not published till 1776? In 1768, a chair of Political Economy, the third in Europe, was founded in the Palatine School of Milan, for Beccaria, who was

celebrated throughout Europe for his work on *Crimes and Punishments*, and who had been led by his friend Verri, to take an interest in Economics, and had published an excellent pamphlet on the bad state of the Milanese money. Beccaria delivered a course of lectures on Political Economy in 1769; but finding that his Free Trade doctrines were likely to create a very strong opposition, his constitutional timidity prevailed, and he refrained from publishing them. He himself said that he was willing to be the apostle of humanity, but not its martyr. Hence his name is comparatively little known in connection with the subject. But there can be no doubt that if Beccaria had had the courage to complete and publish his work, he would have enjoyed the reputation which subsequently accrued to Smith. Beccaria was endowed with a great, a piercing, and a generous mind, but it was vastly less beneficial to the human race than it might have been, because it was overshadowed by a most pusillanimous soul. He was deficient in the very first requisite of a scientific mind, namely the moral courage to brave hostility. He was not one of those magnanimous spirits for whom the highest order in the ranks of Fame is reserved, who will do battle for what they know to be truth, in despite of the opposition of the vulgar of every rank.

Certo da cor, ch' alto destin non scelse
Son l'imprese magnanime neglette:
Ma le bell' alme alle bell' opre elette
Sanno gioir nelle fatiche eccelse:
Nè biasmo popolar, frale catena,
Spirto d'onore in suo cammin raffrena.

which means something of this sort—

True: puny men with feeble hearts endowed
Before a noble enterprise recoil:
But great souls called to do the work of God
Know for itself to love the lofty toil:
Nor can the vulgar cry, a feeble chain,
The noble spirit in its course restrain.

His cowardice of spirit greatly lost him the esteem of Verri. Finding that the sentiments expressed in his lectures gave offence, he stopped, and left them unfinished, and he never published them. They first saw the light in 1804, in Custodi's collection of the Italian Economists. And thus he deservedly missed the fame which would otherwise have been his legitimate due.

Adam Smith, in reality and in truth, then, was the founder neither of Political Economy nor of Free Trade; but he was the founder of the SECOND School of Economists. While adopting the doctrines of the Physiocrates regarding Free Trade, he allowed the first part of his work to be tinged too much with their ideas of the nature of Wealth. But the main purpose of the constructive part of his book is to demonstrate that Labour and Commerce are productive of Wealth.

But like many other scientific reactions, the doctrine went from one extreme to another: from its being held that Labour is not productive of Wealth, it came to be held that Labour is the cause of all Wealth, and of all Value: and that the Value of every thing depends exclusively on the "quantity of labour" in producing it.

This doctrine is very prominently brought forward in Book I., ch. 5, from which we have already quoted largely,[1] and not to repeat the same thing twice over, we must beg our readers to refer to the passages cited. We have shewn into what utter confusion he has thrown the whole subject. But afterwards he says that unless a thing is exchangeable it is not Wealth: doctrines, as we have already shewn, which are quite incongruous.

He has involved himself in inextricable perplexity by adopting *two* distinct measures of value. First, the quantity of labor bestowed upon producing an article; secondly, the quantity of things it will exchange for. Ricardo clearly perceived this inconsistency, and justly censured him for it;[2]—"Adam Smith who so accurately defined the original source of exchangeable value, and who was bound in consistency to maintain that all things became more or less valuable in proportion as more or less labor was bestowed upon their production, has himself erected another standard measure of value, and speaks of things being more or less valuable in proportion as they will exchange for more or less of this standard measure. Sometimes he speaks of corn, at other times of labor, as a standard measure, not the quantity of labor bestowed on the production of any object, but the quantity which it can command in the market, as if these two were equivalent expressions, and as if because a man's labor had become doubly efficient, and he could, therefore

[1] *Ante, ch. v., § 4: On a Standard of Value.* [2] *Principles, p. 5.*

produce twice the quantity of a commodity, he would necessarily receive twice the former quantity in exchange for it. If this, indeed, were true. if the reward of the laborer were always in proportion to what he produced, the quantity of labor bestowed on a commodity, and the quantity of labor which that commodity would purchase, would be equal, and either might accurately measure the variation of other things; but they are not equal, the first is under many circumstances an invariable standard, indicating correctly the variation of other things; the latter is subject to as many fluctuations as the commodities compared with it."

Ricardo, however, admits that this rule is not applicable to all commodities. Thus, he says,—"There are some commodities, the value of which is determined by their scarcity alone. No labor can increase the quantity of such goods, and therefore their value cannot be lowered by an increased supply. Some rare statues and pictures, scarce books and coins, wines of a peculiar quality, which can be made only from grapes grown on a particular soil, of which there is a very limited quantity, are all of this description. Their value is wholly independent of the quantity of labor originally necessary to produce them, and varies with the varying wealth and inclinations of those who are desirous to possess them.

"These commodities, however, form a very small part of the mass of commodities daily exchanged in the market. By far the greatest part of these goods which are the objects of desire, are produced by labor, and they may be multiplied not in one country alone, but in many, almost without any assignable limit, if we are disposed to bestow the labor necessary to obtain them.

"In speaking, then, of commodities, of their exchangeable value, and of the laws which regulate their relative prices, we mean always *such commodities only, as can be increased in quantity by the exertion of human industry, and on the production of which competition operates without restraint.*"

To this we reply that the exclusion of the classes of articles, which are not the subject of unlimited production and competition, from the terms of a general rule, cannot for a moment be permitted by any one who understands the nature of Inductive Philosophy. To limit the scientific rules of Economics to certain classes of cases alone, is just as erroneous as to limit the

science of Astronomy to certain phenomena, which can be accounted for only by some particular hypothesis, such as the Ptolemaic; or to limit the science of Optics to those phenomena alone, which can be accounted for on the corpuscular theory of light; and so on of other cases. But such ideas cannot be tolerated at the present day. How earnestly does Bacon over and over again inculcate that the negative cases are more powerful than the positive ones, and to take heed that we verify our general rules, by applying them to ALL cases, lest peradventure the little David be forgotten. Never was there a more bold defiance and contravention of all the well established laws of modern science than Ricardo's idea. But it must be inexorably rejected. Nothing less will satisfy the requirements of science, than an expression which includes all cases without any exception.

But Ricardo has added to the confusion by using two expressions as if they were identical "quantity of labour" and "cost of production." Now they are in reality very different, as we shall show further on; and at present we confine ourselves to the consideration of the doctrine that Value depends upon "quantity of labour."

Ricardo says[1]—"If the quantity of labour realized in commodities regulate their exchangeable value, every increase of the quantity of labour must augment the value of that commodity on which it is exercised, as every diminution must lower it."

Ricardo calls the quantity of labour required to produce a commodity its "absolute value," and says that if any commodity could always be produced with the same quantity of labour it would be an invariable standard of value. He says,[2]—"The labour of a million of men in manufactures will always produce the same value." And he maintains that natural agents such as the sun, the air,—"though they add greatly to value in use, never add exchangeable value . . . . . as they perform their work gratuitously, as nothing is paid for the use of air, of heat, and of water, the assistance which they afford us adds nothing to value in exchange."

Ricardo however divides commodities capable of indefinite increase into two classes, *first*, those which can be increased to any amount by an expenditure of an equal quantity of labour, such as most manufacturers: *secondly*, those in which every

[1] *Principles, p.* 4. [2] *Principles, ch.* xx.

increased quantity is produced by an increased quantity of labour, such as corn; in the first of these classes he says that their value is determined by the quantity of labour employed in producing them, and in the second class by the quantity of labour employed in producing the last quantity required.

2. We have now to see to what extravagant absurdity these doctrines led.

De Quincey undertook to expound the Ricardian Economics [1] in some dialogues. One of the interlocutors asks X.Y.Z., who represents De Quincey,—if there is any one principle in Political Economy from which all the rest can be deduced. To which X. replies:—

"There is Phædrus: such a principle exists in the doctrine of Value—truly explained. The question from which all Political Economy will be found to move—the question to which all its difficulties will be found reducible is this: *What is the ground of exchangeable Value?* My hat, for example, bears the same value as your umbrella; double the value of my shoes; four times the value of my gloves; one twentieth of the value of this watch. Of these several relations of Value what is the sufficient cause? If they were capricious, no such science as that of Political Economy could exist: not being capricious, they must have an assignable cause: this cause, what is it?

Phæd.: Ay, what is it?

X. It is this Phædrus; and the entire merit of the discovery belongs to Mr. Ricardo. It is this: and listen with your whole understanding: *the ground of all things lies in the quantity* (but mark well that work "quantity") *of labour which produces them.* Here is that great principle which is the corner-stone of all tenable Political Economy; which granted or denied, all Political Economy stands or falls. . . . . Mr. Ricardo's doctrine is that A and B are to each other in value as the *quantity* of labour is which produces A to the quantity which produces B; or, to express it in the very shortest formula by substituting the term *base*, as synonymous with the term *producing labour*, *all things are to each other in value as their bases are in quantity.* This is the Ricardian law: you allege that it was already the law of Adam Smith; and in some sense

[1] *The Templar's Dialogues on Political Economy.*

you are right; for such a law is certainly to be found in the "Wealth of Nations." But, if it is *ex*plicitly affirmed in that work, it is also *im*plicitly denied: formally asserted, it is virtually withdrawn."

Now we mark here the usual progress of evil doctrine. Ricardo began by expressly limiting his doctrines to certain classes of commodities. This limitation is quite unscientific and untenable; but De Quincey asserts that this law is applicable to *all* commodities, without any limitation whatever. Accordingly he maintains that if a hat sells for 18s. it is because the same quantity of labour is required to produce the hat as the silver.

X. or De Quincey, then says—"I affirm that when the labourer obtains a large quantity of corn, for instance, it so far from being any fair inference that wages are then at a high real value, that in all probability they are at a very low real value, and inversely I affirm, that when wages are at their very highest real value, the labourer will obtain the very smallest quantity of corn. And quitting wages altogether (because such an illustration would drive me into too much anticipation) I affirm universally of Y (that is of any assignable thing whatsoever) that it shall become more valuable *ad infinitum*, and yet by possibility exchange for less *ad infinitum* of Z. (*i. e.*, of any other assignable thing (!!) . . . But what is it that I assert? Why, that there is no connection at all of any kind, direct or inverse, between the quantity commanded, and the value commanding (!) . . I should again be introducing the notion of a connection between the quantity obtained and the value obtaining, which it is the purpose of my whole argument to exterminate. For my thesis is, that no such connection subsists between the two as warrants any inference that the real value is great, because the quantity it buys is great, or small, because the quantity it buys is small; or reciprocally, that, because the real value is great or small, therefore the quantities benefit shall be great or small."(!)

Then he says—"Wages are at a high real value when it requires much labour to produce wages; and at a low real value, when it requires little labour to produce wages; and it is perfectly consistent with high real value—that the labourer should be almost starving; and perfectly consistent with the low real value—that the labourer should be living in great ease and com-

fort. (!) . . . . Meantime, I presume that in your use, and in everybody's use of the word value, a high value ought to purchase a high value, and that it will be very absurd if it should not. But as to purchasing a great *quantity*, that condition is surely not included in any man's idea of value." (! !)

We have already quoted the doctrine of McCulloch, who affirms that nothing given by nature can have any value; and he also joins with Ricardo in condemning[1]—"Say, who contends that natural agents, by contributing materially to the production of most sorts of commodities, not only add to the mass of useful and desirable products, but also to their value in exchange. This is a fundamental error, into which Say was led from his confounding utility and value."

We have so completely shewn the fallacy of the doctrine that Labour is the *cause* of Value[2] that we need not repeat the refutation here. But when a large oak tree is evidently more valuable than the acorn, and fermented wine than new wine, what do our readers think was the answer of these Economists? Why that it was entirely due to Labour! Senior says[3]—"We have already observed that many recent writers have considered value as solely dependent on labour. When pressed to explain how wine in a cellar, or an oak in its progress from a sapling to a tree, could on this principle, increase in value, they replied that they considered the improvement of the wine and the growth of the tree as so much additional labour bestowed upon each! !" And McCulloch expressly maintains[4] that the fermentation of wine or beer is labour! Surely the very statement of such a doctrine must insure its condemnation by every sane man.

3. The very slightest consideration will shew the utter absurdity of the doctrine that all things exchange according to the "quantity of labour" bestowed in producing them.

Nothing is more common in a coal mine than for the different strata of coals to be of totally different qualities. Some strata, perhaps, near the top may be of excellent quality; some lower down of very inferior quality, mixed with shale and other rubbish; now the coals obtained from the latter seams may require a greater, or at all events, an equal "quantity of labour"

[1] *Note I. to his Edition of Smith.*
[2] *Ante, ch.* v., § 7-13.
[3] *Political Economy, p.* 57.
[4] *Note* 1 *to Adam Smith.*

to obtain than the better coals do. But will they sell for an equal price? Common sense and experience show that they will not, but that the better qualities of coal will sell for a higher price than the inferior qualities; no matter what the quantity of producing labour is.

This single example is enough to dispel this transparent fallacy; and every reader can suggest to himself multitudes of analogous cases.

It is alleged that Lord Macaulay received £20,000 for the copyright of his History of England—of course we have no knowledge whatever on the subject, but such was the popular rumour,—now, 200 very fine oak trees would sell for £20,000 on the ground; also 1,000 cattle would sell for £20,000; and 10,000 sheep would sell for the same sum: therefore, according to this doctrine, the "quantity of labour" in Lord Macaulay writing his history, was equal to the "quantity of labour" in the 200 oak trees growing; was also equal to the "quantity of labour" in 1,000 cattle growing; and also equal to the "quantity of labour" in 10,000 sheep growing!

Surely we have had enough of this Bedlamite rubbish; and it may be asked why do we load our pages with it? simply for this reason, that this idiotic stuff is the official Political Economy in England at the present day! This is what the candidates for the Civil Service of India are told to believe in, as the perfection of human wisdom, and which is still taught and recommended in our Universities!! *Proh pudor!*

On Value as dependent on Cost *of* Production.

4. Ricardo, who adopted and developed Smith's idea that value depends upon "quantity of labour," uses another expression which he evidently considers as identical with it; namely, "cost of production," and he maintains that "cost of production" is the *regulator* of value. The two expressions are widely different, though Ricardo evidently thought them, and used them as, equivalent. We need only observe that wages constantly rise and fall for exactly the same quantity of labour": therefore "cost of production" constantly varies, while "quantity of labour" remains the same.

It is far more plausible to say that Value is regulated by

"Cost of production" than by "quantity of labour," as we shall shew. We apprehend that no sane man in the present generation will maintain that the growth of a tree, or an animal, is labour. The idea that the value of an ox is regulated by the "quantity of labour" in it would be universally scouted now-a-days. But to say that the value of an ox depends upon "cost of production" is much more plausible, because oxen are only fed and reared at a very considerable expense: the fields they graze in might yield corn: and consequently the price of oxen must repay their cost with a profit, or else oxen cannot be reared.

So also no sane man now-a-days would adopt McCulloch's idea that the fermentation of beer or wine, and the improvement of wine in a cellar, is labour; but as the growth of the wine is attended with great expense, and it must be kept several years before it is fit to drink, the interest on the Capital laid out on it will accumulate at compound interest, and consequently it may fairly be called the "cost of production" of the wine. And unless the price of the wine repays all that, the wine could not be produced.

Hence whilst we hope that the expression "quantity of labour" is exterminated for ever from the Science, "cost of production" remains as a perfectly intelligible expression. And the real question which has to be examined is this,—Does "Cost of production" *regulate* price? That is, does a change in the "cost of production" necessarily produce a change in price.

What is COST *of* PRODUCTION?

5. But here we are met at the very outset by a very serious difficulty—What is "Cost of production? We find that writers differ most widely as to what is included in the term. Smith says that Rent, Wages, and Profits are the CAUSE of all Value: these are what he calls Natural Price. But afterwards he contradicts himself and says that "high or low wages or profits are the *causes* of high or low prices: high or low rent is the *effect* of it." As we have shewn in the next chapter, these contradictory assertions gave rise to an investigation of the Theory of Rent, and it is now clearly demonstrated that Rent is an *effect* of Price, and not a *cause*; and that no reduction would

take place in the price of corn, although landlords should forego the whole of their rents: the rents would simply go into the pockets of the farmers, and the price of corn would remain exactly the same.

There remain, therefore, Wages and Profits. Now Wages are manifestly part of the "cost of production." But it has been keenly debated among Economists whether Profits should be held to be a part of "cost of production." Smith says that Profits are part of *natural* price, because unless there is a certain amount of Profit, the article will not continue to be produced; and Ricardo also includes Profits under "cost of production."

Mr. Mill seems not to include Profits in "cost of production." He says,[1]—"Unless that value is sufficient to repay the cost of production and to afford besides, the ordinary expectation of profits, the commodity will not continue to be produced. And—"The cost of production, together with the ordinary profit may, therefore, be called the *necessary* price or value of all things."

In the next section he says—"Profits, therefore, as well as wages enter into cost of production, which determines the value of the produce." But by profits in this sentence he means a different thing from profits in the preceding sentence. When Smith and Ricardo say that profits are part of "natural price," or of "cost of production," they mean the profits of the producer of the article. But in the last sentence quoted, Mr. Mill means the profits of persons who have contributed to preceding stages of the article. After saying that besides wages, capital is necessary for production, he says[2]—"This being the result of abstinence, the produce or its value, must be sufficient to remunerate, not only all the labour required, but the abstinence of all the persons by whom the remuneration of the different classes of labourers was advanced. The return for abstinence is Profit, and profit, we have also seen, is not exclusively the surplus remaining to the capitalist after he has been compensated for his outlay, but forms in most cases, no unimportant part of the outlay itself. The flax spinner, part of whose expenses consists of the purchase of flax and of machinery, has had to pay in their price, not only the wages of the labour by which the flax was grown, and the machinery made, but the profits of the

[1] *Bk.* iii., *ch. iii*, § 1. [2] *Bk.* iii., *ch. iv.*, § 4.

grower, the flax dresser, the miner, the iron founder, and the machine maker. All these profits, together with those of the spinner himself, were again advanced by the weaver, in the price of his material, linen yarn: and along with them the profits of a fresh set of machine makers, and of the miners and iron-workers who supplied them with their metallic material. All these advances form part of the cost of production of linen. Profits, therefore, as well as wages, enter into the cost of production which determines the value of the produce."

While, therefore, Mr. Mill rightly includes the profits of the preceding producers who have contributed to the production of the linen yarn, under the term "cost of production" of the linen, he does not include the profits of the producer of the linen itself under its cost of production. And in this we agree with him. Smith himself clearly allows that profits are no part of prime cost. Production is the placing any quantity in a required place, and, no doubt, unless there were profits anticipated, production would cease. But the cost of production means the cost of actually placing the article in the required place, and profits are no doubt the *inducement* to produce, but not part of the *cost* of producing. It seems better to restrict the expression "cost of production" to what mercantile men call *prime cost*. Profits are the difference between prime cost and market price.

On COST *of* PRODUCTION *as affecting* VALUE.

6. Ricardo says[1]—"It is the cost of production which must ultimately regulate the price of commodities, and not as has often been said the proportion between the supply and the demand; the proportion between supply and demand may, indeed for a time affect the market value of a commodity, until it is supplied in greater or less abundance, according as the demand may be increased or diminished, but this effect will only be of temporary duration. . . .

"The opinion that the price of commodities depends solely on the proportion of supply to demand, or demand to supply, has become almost an axiom in Political Economy, and has been the source of much error in that science."

[1] *Principles, ch.* 30.

He then quotes the doctrine of Say that supply and demand regulate prices at all times, but that cost of production is a limit below which they cannot remain any length of time, because production would then be either entirely stopped or diminished, and Lord Lauderdale's doctrine (given above), and he says—"This is true of monopolized commodities, and, indeed, of the market price of all other commodities for a limited period. If the demand for hats should be doubled, the price would immediately rise, but the rise would only be temporary; unless the cost of production of hats, or their natural price, were raised. If the natural price of bread should fall 50 per cent. from some great discovery in the science of agriculture, the demand would not greatly increase, for no man would desire more than would satisfy his wants, and as the demand would not increase, neither would the supply; for a commodity is not supplied merely because it can be produced, but because there is a demand for it. Here, then, we have a case where the supply and demand have scarcely varied, or if they have increased, they have increased in the same proportion; and yet the price of bread will have fallen 50 per cent., at a time, too, when the value of money had continued invariable.

"Commodities which are monopolized, either by an individual, or by a company, vary according to the law which Lord Lauderdale has laid down; they fall in proportion as sellers augment their quantity, and rise in proportion to the eagerness of the buyers to purchase them, their price has no necessary connection with their natural value; but the prices of commodities which are subject to competition, and whose quantity may be increased in any moderate degree, will ultimately depend, not on the state of demand and supply, but on the increased or diminished cost of their production."

Mr. J. S. Mill agrees in this doctrine. We have shewn above that he says that there is a law different from supply and demand, which regulates the permanent or average values of the class of commodities we are considering. And in agreement with Ricardo he says,—"It is, therefore, strictly correct to say, that the value of things which can be increased in quantity at pleasure, does not depend (except accidentally, and during the time necessary for production to adjust itself) upon demand and supply; on the contrary, demand and supply depend upon

it."—"To recapitulate, demand and supply govern the value of all things which cannot be indefinitely increased; except that, even for them, when produced by industry, there is a minimum value determined by cost of production. But in all things which admit of indefinite multiplication, demand and supply only determine the perturbations of value, during a period which cannot exceed the length of time necessary for altering the supply."

Our readers will observe Mr. Mill's reasoning. He says that the value at *any* particular time is the result of supply and demand; the plain meaning of which is, that the value at *all* times is the result of supply and demand. And then he goes to search for a law other than demand and supply, which regulates their permanent value! That is to say, their permanent value is regulated by a different law from that which regulates it at *all* times!

Malthus, who was a good mathematician, naturally felt that Ricardo's method of reasoning was inadmissible. He says[1]—"It has been shown that no change can take place in the market prices of commodities, without some previous change in the relation of the demand to the supply; and the question is, whether the same position is true in reference to natural prices? This question must of course be determined by attending carefully to the nature of the change which an alteration in the cost of production occasions in the state of the demand and the supply, and particularly to the specific and immediate cause by which the change of price which takes place is effected.

"We all allow, that when the cost of production diminishes, a fall of price is almost universally the consequence; but what is it specifically, which forces down the price of the commodity? It has been shown in the preceding section, that it is an actual or contingent excess of supply.

"We all allow that when the Cost of Production increases, the prices of commodities rise. But what is it specifically, which forces up the price? It has been shown that it is an actual or contingent failure of supply. Remove these actual or contingent variations of the supply; that is, let the extent of the supply remain exactly the same, without excess or failure, whether the cost of production rises or falls; and there is *not*

[1] *Principles of Political Economy*, p. 71.

the slightest ground for supposing that any variation of price would take place.

"If for instance, all the commodities which are produced in this country, whether agricultural or manufactured, could be produced during the next ten years without labour, but could only be supplied exactly in the same quantities as they would be in the actual state of things; then, supposing the wills and means of the purchasers to remain the same, there cannot be a doubt that all prices would also remain the same. But if this be allowed, it follows that the relation of the supply to the demand is the dominant principle in determination of prices, whether market or natural, and that the cost of production can do nothing but in subordination to it, that is merely as it effects the ordinary relation which the supply bears to the demand.

"It is, however, not necessary to resort to imaginary cases, in order to fortify this conclusion. Actual experience shews the principle in the clearest light.

"In the well known instance noticed by Adam Smith, of the insufficient pay of curates, notwithstanding all the efforts of the legislature to raise it, a striking proof is afforded that the permanent price of an article is determined by the demand and supply, and not by the cost of production. The real cost of the education, would in this case, be more likely to be increased than diminished by the subscription of benefactors; but a large part of it being paid by benefactors, and not by the individuals themselves, it does not regulate and limit the supply; and this supply, on account of such encouragement, becoming and continuing abundant, the price is naturally low, whatever may be the real cost of the education given.

"The effects of the poor-rates in lowering the wages of independent labor, present another practical instance of the same kind. It is not probable that public money should be more economically managed than the income of individuals; consequently the cost of rearing a family cannot be supposed to be diminished by parish assistance; but a part of the expenses being borne by the public, and applied more largely to laborers with families than to single men, a fair and independent price of labor, adequate to the maintenance of a certain family, is no longer a necessary condition of a sufficient supply. As by means of parish rates so applied, this supply can be obtained without

such wages, the real costs of supplying labor no longer regulate the ordinary wages of independent labor.

"In fact, in every kind of bounty upon production, the same effects must necessarily take place; and just in proportion that such bounties tend to lower prices, they show that prices depend upon the supply compared with the demand, and not upon the cost of production."

Having now presented to our readers the opinions of these various writers, we shall endeavour to discover some principles which may decide the controversy, which is at the basis of the whole theory of Economical Dynamics.

The doctrine, then, whose soundness we are going to investigate is this, that there are two classes of cases of value, in the first of which *Cost of Production regulates Value*, in the other the *Cost of Producing the last quantity raised regulates the Value of the whole.*

Now, before we investigate the truth of these laws, we shall lay down certain fundamental principles, drawn from the whole analogy of Physical Science:—

I. There cannot be more than one grand general Theory of Value.

II. That if two, or more, Theories of Value will apparently account for any class of phenomena of value, or changes of value, that Theory only is to be held as the true one, which accounts for ALL *the phenomena in the Science, and not that single class of phenomena only.*

Hence it is quite clear that, if in any particular class of phenomena, we have several theories which will apparently account for them, we have, in order to discover which is the true law, only to suppose a change in the relation of the quantities, and then that theory only which holds good for the altered relation of the quantities, and accounts for the change, is the true Law, and all others must be rejected.

This is in exact conformity with the 3rd Aphorism of the *Novum Organum*, Book I.—"Quod in *contemplatione* instar causæ est, id in *operatione* instar regulæ est."—"That which in *Theory* is the *Cause*, in *Practice* is the *Rule*."

The result derived from these principles is this, that the Law according to which changes of value take place, is the Law of Value at all particular times.

Now, as soon as these indubitable principles are laid down, the day is lost for Ricardo and his followers; because Ricardo himself admits that the law of *Supply and Demand* governs the market price of all commodities for a limited period. And Mr. Mill says that the Law of *Supply and Demand* only governs *perturbations* of value.

Now this concedes the whole question. Because the law which governs the perturbations, or changes, of Value, can be the only true law of Value in all particular cases.

There are several cases where "quantity of labour" and "cost of production" may be considered as equivalent, and the same argument will apply to shew that neither *regulates* value. But take it as we may, either quantity of labour or money cost of production, we shall shew that the doctrine that cost of production regulates value is entirely false; because, if this doctrine be true, it must necessarily mean:—

1st. That all things which are produced by an equal quantity of labour, or an equal money cost, must be equal in value, independently of any other consideration.

2 lly. It must also mean, that all changes in value must be due to changes in cost of production, and to nothing else.

3rdly. And if different things produced by equal quantities of labour must be equal in value, still more rigorously, if possible, must it follow that all parts of the same thing when once produced, must be equal in value.

We shall now give examples of each of these cases, to shew that the rule is utterly untrue.

We have already quoted the case of a coal-mine, where the seams are of different qualities. The coal got from them, however, is obtained by exactly the same "quantity of labour" or "cost of production" and yet sells for very different prices: this proves at once that "quantity of labour" or "cost of production" does not *regulate* the value.

Again, let us suppose an orchard, or garden. The trees are, of course, cultivated with a certain amount of labour, or expense: consequently, each individual piece of fruit must be the result of exactly the same quantity of labour, or cost. Yet everyone knows that out of the very same orchard, and off the very same tree, fruit of very different qualities will be gathered. Will these

different qualities of fruit fetch the same price in the market? Common sense says they would not.

Next let us take the third case, for the sake of convenience. If cost of production regulates value, it is quite clear that every part of the same thing ought to be the same price. The slightest reflection, however, will shew that this is utterly false. Take any animal used for food, for example. Do equal quantities of all parts of the same sheep, or the same ox, bear the same price in the market? Common sense says they do not.

Would equal quantities of the fruit of a tree and of the wood of a tree sell for the same price in the market? Common sense says they would not.

We will give another decisive instance. In the coffee plantations in the East Indies, it is usual when the crop is gathered, to employ labourers to separate the berries into three distinct classes, the large, the middling, and the small. Now each of these classes of berries is the produce of the same "quantity of labour," or "cost of production," yet these different classes of berries sell for extremely different prices; and so much more is gained on the whole value of the crop, by separating the berries into these three classes, rather than by letting them remain mixed up together, that it is worth while to expend this labour, or cost, upon it. What can more decisively prove the fallacy of the assertion that labour, or cost, regulate Value?

Ricardo says in the passage already quoted,—"That if the demand for hats should be doubled, the price would immediately rise; but that rise would only be temporary unless the cost of production of hats, or their natural price were raised." But if the hats rose from the increased demand, why should they fall again, without the supply being increased? If they are to fall again, why should they have risen? If cost of production, supply, and demand, remain exactly the same after they have risen, how can any change in their value take place? Ricardo has omitted to state, what he meant, no doubt, that upon the rise of prices from the increased demand, a larger supply would be produced, which would again reduce hats to their former value. But the omission of this is the whole essence of the question. Because it was the increased demand which raised them, and it would only be the increased supply which would lower them.

Thus shewing that it is entirely through the operation of demand and supply that all changes in value take place.

Ricardo's doctrine that when prices are very high or very low, they are governed by the Law of Demand and Supply, but that at some intermediate point they are governed by the Law of Cost of Production is utterly contrary to the *Law of Continuity*, which says that, *A Quantity cannot pass from one amount to another by any change of conditions without passing through all the intermediate magnitudes according to the intermediate conditions.* If, therefore, the Law of Demand and Supply be true at any one point in the range of prices, it must be true at *all* points.

Mr. Mill has on this, as in so many other cases, emitted doctrines which are contradictory. Thus he says,[1]—"For this reason, and from the erroneous notion that value depends on the *proportion* between the demand and the supply, many persons suppose that this proportion must be altered whenever there is any change in the value of the commodity; that the value cannot fall through a diminution of the cost of production, unless the supply is permanently increased; nor rise, unless the supply is permanently diminished. But this is not the fact."

But afterwards he says,[2]—"It is simply the Law of Demand and Supply, which is acknowledged to be applicable to all commodities, and which in the case of money, as of most other things, is *controlled, but not set aside*, by the Law of Cost of Production, *since cost of production would have no effect on value, if it could have none on Supply.*"

So also, in speaking of another class of cases, Mr. Mill says,[3]—"Since cost of production here fails us, we must revert to a law of value *anterior* to cost of production, *and more fundamental*, the Law of demand and snpply."

Again, in speaking of the law governing International Values, Mr. Mill says,[4]—"We have seen that it is not their cost of production . . . . . We must accordingly, as we have done before in a similar embarrassment, fall back upon *an antecedent law*, that of supply and demand: and in this we shall again find the solution of our difficulty."

Now these extracts exhibit the utterly unscientific character of

[1] *Bk.* iii., *ch.* 3, § 1.
[2] *Bk.* iii., *ch.* 9, § 3.
[3] *Bk.* iii., *ch.* 16, § 1.
[4] *Bk.* iii., *ch.* 18, § 1.

Mr. Mill's system, which is contrary to the fundamental principles of Natural Philosophy. It is no more to be tolerated that different classes of Economic phenomena should be governed by different fundamental Laws of Value, than that different classes of Astronomical phenomena should be governed by fundamentally different theories; or that different classes of Optical phenomena should be explained on different theories of Light. When the analyst seeks for the Equation to a curve, he manifestly assumes that the Law which is true at any *one* point must be true at *all* points. For if not, how can there be a *general* Equation to the curve? If different classes of Economical phenomena have different fundamental theories, how can there be any General Equation in Economics? How can it be a Physical Science? Now as it is universally admitted to be a demonstrated truth, that a great *many* cases of Value are governed by the Law of Demand and Supply, it follows that *all* cases *must* be so; and the distinctions which have been made are contrary to the principles of Inductive Philosophy, and must be swept away.

Wages are part of cost of production, and Smith says that high wages *cause* high prices; we have shewn[1] that this is a complete error; and that it is just as often that wages, *i. e.*, cost of production, are governed by the value of the product, as the reverse. We, therefore, say no more about it here.

In a great number of cases it is impossible to say what the cost of production of any article is, and the very fact of a market being opened up for it, is the very thing that confers value on it. In the last century, eggs were at 1d. a dozen in the Highlands of Scotland, and salmon was so abundant, that it had scarcely any saleable value at all, there being no communication with the Southern markets. When this communication was opened, eggs rose to 4d. or 6d. a dozen, and salmon acquired a value of about 1s. a pound. That was because agents from the South came and bought up the produce, because eggs were, perhaps, 1s. 6d. a dozen in the London markets, and salmon was 2s. 6d. a pound. Now, eggs were not a 1s. a dozen in London because they were 4d. a dozen in the Highlands, but people gave 4d. a dozen for them in the Highlands because they could get 1s. a dozen for them in London. What, then, becomes of the Ricardian rule, that cost of production regulates value? In this

[1] *Chap.* xiii.

case it was the value of the eggs in the London market, that regulated their value in the Highlands, and not the reverse, and the same is obviously true of all other species of produce.

The universal law in Political Economy is, therefore, that THE RELATION BETWEEN DEMAND AND SUPPLY IS THE SOLE REGULATOR OF VALUE. This law, like the law of gravity, holds good in all cases whatever. It not only governs the value of any article, but also governs the value of every separate item of which that article is composed. All circumstances whatever that influence value, can be shewn to do so solely through their effect in altering the relation of supply and demand.

Price, then, is a perpetual struggle between the buyer and the seller, and the circumstances which compel one party to yield, are the only measure of value at the time of the purchase. To say that the cost of production regulates price is only true in this sense, that no man would willingly sell any articles he has produced at a less price than that, together with something additional, by way of reward for his own labor, and he could not continue do so for any length of time; but having settled that in his own mind as the lowest limit, he always endeavours to get as much more as he can, without the smallest reference to the cost of production; and how much more he can get is determined by the rule we have given above, namely, by the necessity the purchaser has for that particular service, together with the number of competitors to render it; on the other hand the purchaser cares nothing for the cost of production; his only object is to buy as cheap as he can, and he takes no thought whether the seller is selling at a loss or not. The result of this will be that if the selling value of any article falls below its cost of production for a length of time, it will cease to be produced. Every man endeavours to produce as cheap as he can, and to sell as dear as he can, and the two operations are quite independent of each other.

When we say that the relation between supply and demand is the sole regulator of value, we mean to say that a change of value depends solely upon a change in that relation and upon nothing else. No change in the cost of production will make any change in value, unless it is also accompanied by a change in the relation of demand and supply, and it is only through and by means of causing such an alteration, that a change in

the cost of production is usually accompanied by a change in value.

In order to illustrate this, let us take a few examples; let us take any article, such as stockings, and let us suppose that at any given time they bear a certain price in the market, no matter what, and that there is a certain demand for them at that price.

Let us suppose that at a certain time before the introduction of machinery, a manufacturer employed 1,000 hands; let us also suppose that he at some time invents a piece of machinery by which he can produce the same quantity of stockings, but at the same expense as 50 men would be. Now, if he only produces the same quantity as before, as he will of course take the best price he can get for them, the demand remaining the same, it is quite evident that no alteration in price will ensue, and all the profit accruing from this diminution in the cost of production will go into the pocket of the producer; consequently, if he does not manufacture any additional quantity, no alteration in the market price will follow, everything will go on as before; the only difference will be that that particular manufacturer will make enormous profits, owing to his sagacity and skill in inventing this machinery. But if the materials for making the stockings can be supplied in unlimited quantities, the manufacturer will naturally wish to increase the quantity he produces, and realize greater profits; but if he produce a greater quantity than before, that increased quantity will not be sold, unless offered at a diminished price, so as to increase the circle of buyers; but as the cost of their production has been diminished to him, he can afford to sell at a diminished price; and the more he wishes to sell, the more must the price be reduced. Now, it is quite evident that the increased quantity of this single manufacture thrown upon the market, and offered at a diminished price, will affect the prices of the whole quantity in the market, because every one else must consent to sell at the same price to effect a sale at all. It is also clear that every single manufacturer must accommodate his prices to the market price, and if he cannot produce at the market price he will have to cease producing; and as we may suppose that there are several degrees of skilfulness and economy among the various manufacturers, it is quite evident that at every successive diminution of the market price,

those in succession will have to cease working who are least able to produce cheaply. Hence, it is quite clear that it is the market price which regulates the quantity of expense that can be afforded in producing, and that it is the quantity that can be produced at the least expense, compared to the whole quantity that can be sold, that regulates the market price.

Again, let us observe what is the result of a diminution of the cost of production, according to various circumstances. The Northern counties of Scotland export corn and cattle to the Southern markets. They were served by a Steam Company, which had a monopoly of the trade. The usual consequences of a monopoly followed. Those which concern us here, as a question of Political Economy, were, that the freights and fares were most extravagent, and all petitions for reduction were unheeded, as the Company thought there was no danger of opposition. However, the people of the North could stand it no longer, and they determined to provide steam-boats of their own. The natural consequence immediately followed, freights and fares were reduced nearly one half. Almost all the farmers subscribed for shares in the steamer, and many of them told me that if they lost all the money sunk in the steamer, they would still be great gainers by the saving of freights. That is, the diminution in the cost of production (*i.e.*, the expense of placing their produce in the Southern markets,) went into their pockets. And why was this? Because the additional quantity of corn, &c., thrown by the Northern districts upon the Southern markets, was a mere drop in the bucket, compared to the demand of the Southern markets, and had no appreciable effect in lowering prices there, consequently, all the profits arising from the saving of freight, and the diminution of the cost of production, went into the pockets of the Northern farmers and landlords.

It is far more generally true that it is the value of the article when produced that governs the cost of production, than the contrary rule. It is true that it is often said that the prices of goods are raised because wages have risen,—as was the case with the iron trade in 1854—but, then, what was the cause of the rise of wages? Simply a greater demand on the part of the public for articles of iron, for ships, for rail-roads, steam engines, &c. It was this original demand on the part of the public for iron that raised the price of labor, and the rise of

wages reacted upon the price of iron. The producers of iron articles were able to raise their price to the public because there was a great demand for them. The demand by the public increased faster than it could be supplied. If the increased supply required could have been furnished as quickly as it was wanted, there would have been a rise in wages, but not in the price of the article itself. Hence, the true cause of the rise in the price of the article was not the rise in wages, but the demand for the manufactured article increasing quicker than it could be supplied. A few months after that, a great revolution took place, the price of iron fell 30 per cent., and wages were reduced; but was it the reduction of wages, *i. e.*, the cost of production, that caused the fall in the price? Certainly not, but it was the fall in the price caused by the diminution of the demand compared to the supply, that compelled a reduction in the cost of production, or wages.

These considerations are sufficient to shew the fallacy of the doctrine, that it is the cost of production which regulates price, or value. On the contrary, it is generally the value an article is expected to have, when produced, that causes it to be produced. The difference between the cost of its production and its value is called the *profit*, and the course of a prudent man would be, first to calculate the cost of production of the article, then to consider what would be its probable value when produced, and if the difference between the two, or the profit, is sufficient to make it worth his while to produce it, he will do so, if not, he should try to discover some more profitable operation. If the value of the article when produced is only equal to, or less than the cost of production, he must sell at a loss, and repeated operations of this nature will end by ruining him. The history of all commerce is but too full of examples of the value of articles falling below the cost of production, and of mercantile enterprises which never pay their expenses. There is but one way by which a producer can govern price by the cost of production, and that is when he can obtain a command over the supply, and limit it artificially, and not produce more than the public can be made to buy at a particular price. The Dutch acted upon this principle when they conquered the Spice Islands in the Eastern Archipelago. With contemptible selfishness, they cut down three-fourths of the spice-bearing trees, and so

artificially enhanced the value of the remainder. It is also said that there is but one mine in England which produces plumbago, or black lead for pencils, and this being in the hands of one proprietor, he carefully limits its annual produce to force up its price in the market.

It is necessary to observe, that when we say that a change in price invariably depends upon a change in the relation of supply and demand, we by no means assert that the change in price is directly proportional to a change in that relation, so that, for instance, an addition of one-fourth of the quantity, would produce a reduction of one-fourth in price. It is well known that this proportion does not hold; and that a different proportion is found to obtain among different articles. Nor, though attempts have been made in some instances, such as corn, to discover the relation that exists between the two, does it appear that any satisfactory solution has been obtained. All that can be said is that it is a change in the one that produces a change in the other, without asserting that there is any fixed proportion between the two changes, because it may very well be, and we believe it to be the case, that that proportion follows no fixed law, but varies according to time and circumstances.

It is perfectly manifest that any diminution of the cost of production, through however large an extent of country it might cover, would have no effect whatever in altering the market price, until the extra quantity thrown upon the market bore an appreciable proportion to the previous supply. And if districts of country are excluded from markets, either by want of communication or by prohibitive laws, then, when there are markets opened to them, their produce will acquire an immensely increased value to what it had before. That is, the opening of the markets will immensely increase the value to what it had before. That is, the opening of the markets will immensely increase the value of the produce in the country, and the increased quantity of produce thrown upon the market, will tend to lower the value of the produce in that market, and these two values will approach to each other in the inverse proportion of the respective quantities, precisely as the space travelled through by each of the two bodies under the influence of gravity, is in the inverse proportion of their masses. The establishment of steam navigation enormously increased the value of produce

in the north of Scotland, the repeal of the corn laws enormously increased the value of produce in the Danubian principalities.

A consideration of the preceding examples will furnish us with the following rules:—

1. No change in the cost of production will cause a change in value, unless it is accompanied by a change in the relation of supply and demand.

2. A diminution in the cost of production, when effected without an increase of the quantity produced, goes entirely to the benefit of the producer.

3. A diminution in the cost of production, in cases where the quantity of the produce can be increased without limit, goes entirely to the benefit of the consumer.

4. A diminution in the cost of production, in cases where the quantity is increased, but not without limit, goes partly to the benefit of the producer, and partly to the benefit of the consumer, and this benefit is divided between the two in the inverse proportion of the extra quantity added, compared to the previously existing consumption.

The systems, both of Adam Smith and Ricardo, although there may appear to be a difference between them, are, nevertheless, identical in their fundamental error, for they look to the wrong person as conferring value on any article. They both look to the *producer* as conferring value on the article, whereas it is unquestionably certain that it is the *consumer* who bestows value. Adam Smith says, that it is the labor which the producer bestows upon the article that gives it its value, whereas it is perfectly indisputable, that things have not value *because* labor is bestowed upon producing them, but much labor is bestowed upon producing them, because people desire them very much, and will give a great price for them, and, therefore, they have a great value. Ricardo says, that cost of production regulates value. But it is indisputably true, that things are not valuable because they are produced at a great expense, but people spend much money in producing, because they expect that others will give a great price to obtain them; that is, the things will be of great value when produced. Buyers do not give high prices because sellers have spent much money in producing, but sellers spend much money in producing, because they hope to find buyers who will give more.

It is perfectly true that in a great many cases the natural effects of competition will cause the price to approach very nearly to the cost of production, and Ricardo's rule will *apparently* be found to answer. But this is just one of the things which must be most sedulously guarded against in science, viz., to give in a careless adherence to a form of expression which is radically erroneous, because it *appears* to account for phenomena. We will give an exact parallel. In the olden times philosophers thought that the motion of projected bodies had a natural tendency to decay. They always saw that the motion of a body projected gradually diminished, and finally ceased. Now, it is quite easy to calculate results upon this principle. Given a certain velocity of projection, it would have been quite easy to calculate when the motion would cease, upon the supposition that it naturally decayed. And the results would have agreed with the calculation. What could be more satisfactory? If, then, it is hastily assumed that, because results may agree with calculation, the principles of those calculations are, therefore, *necessarily* true, those opinions might have maintained their ground. But it is well known that modern philosophers have entirely rejected such a notion, as that motion has a natural tendency to decay. But they arrive at the same result by a totally distinct principle. They say that motion has no natural tendency to decay; but that, in all the cases we see, there are counteracting principles, such as the resistance of the air, friction, &c., which oppose it, and finally destroy it. And they unanimously reject the former mode of accounting for the results, and adopt the latter. Hence, we see that though principles are manifestly erroneous, which do not account for results, yet it does not necessarily follow that any principle which does account for them is, therefore, necessarily true, because, in fact, it may happen that several different principles may account for the result, and it requires judgment to decide which is the true one. Now, the Ricardian principle of value is just like the former of those of motion. It apparently accounts for results in a great many cases, and, therefore, may impose upon an unwary thinker. But it is a dangerous and seducing error, utterly false in principle, and to be repudiated and rejected by those who study Economics in the true spirit of science.

CHAPTER X.

ON RENT.

SMITH'S SELF-CONTRADICTIONS ON RENT—ANDERSON—RICARDO'S THEORY OF RENT—MCCULLOCH—MR. J. S. MILL ON RENT—CAREY'S THEORY OF RENT—THE THEORY OF RENT.

1. We have now to shew the application of the *Principle of the Continuity of Science*, and the *Law of Continuity*, to annihilate one of these false distinctions which have been created by Ricardo and adopted by Mr. Mill, between the Laws regulating the value of different classes of commodities, and to reduce it to the General Theory of Value.

The discussion arose out of Smith's clearly self-contradictory doctrines on the relation between Rent and the Value of corn. In discussing the price of commodities he says[1]—"In the price of corn, one part pays the rent of the landlord, another pays the wages or maintenance of the labourers and labouring cattle employed in producing it, and the third pays the profit of the farmer. These three parts seem either immediately or ultimately to make up the whole price of corn." Again—"Wages, Profit, and Rent, are the three original *sources* of all revenue, as well as of all exchangeable value." And again in the same chapter —"As in a civilized country, there are but few commodities of which the exchangeable value rises from labour only, rent and profit contributing largely to that of the far greater part of them."

And in the next chapter he says that there is in every society or neighbourhood an ordinary or average rate of wages, profit, and also of rent; the latter regulated partly by the general circumstances of the society or neighbourhood in which the land is situated, and partly by the natural or improved fertility of the land.

"These ordinary or average rates may be called the natural rates of wages, profit, and rent, at the time and place at which they commonly prevail.

[1] *Bk.* i., *ch.* 6.

"When the price of any commodity is neither more nor less than what is sufficient to pay the rent of the land, the wages of the labour, and the profits of the stock employed in raising, preparing, and bringing it to market according to their natural rates, the commodity is then sold for what may be called its natural price.

"The commodity is then sold precisely for what it is *worth* (!) or for what it really costs the person who brings it to market. . .

"The actual price at which any commodity is commonly sold is called its market price. It may either be above, or below, or exactly the same with its natural price.

"The market price of every particular commodity is regulated by the proportion between the quantity which is actually brought to market, and the demand of those who are willing to pay the natural price of the commodity, or the whole value of the rent, labour, and profit, which must be paid in order to bring it thither."

Now these extracts affirm as clearly as can be, that Rent, Wages, and Profit, enter into the piece of corn exactly in the same way: so that if one be a *cause* of high price the others must be so too.

But in a subsequent chapter he says [1]—"Rent it is to be observed, enters into the composition of the price of commodities in a different way from Wages are Profit. High or low wages and profit are the *causes* of high or low price; high or low rent is the *effect* of it. It is because high or low wages and profit must be paid in order to bring a particular commodity to market, that its price is high or low. But it is because its price is high or low, a great deal more, a very little more, or no more, than what is sufficient to pay those wages and profit, that it affords a high rent, or a low rent, or no rent at all."

Now these doctrines as to Rent are most manifestly self-contradictory. Leaving out of consideration altogether his doctrines as to Wages and Profits, which will be investigated separately in the following chapters, Smith's doctrines as to Rent are most manifestly self-contradictory in these sets of extracts. In the first he manifestly makes Rent enter into price in the same way as Wages and Profits, and to be a *cause* of Price: in the second he makes Rent to enter into Price in the opposite way to Wages and Profit, and to be the *effect* of Price.

[1] *Bk.* i., *ch.*, 2, *On the Rent of Land.*

He then says that there are some parts of the produce of land which always afford some rent; and others which sometimes do and sometimes do not afford rent. He says—"Human food seems to be the only produce of land which *always and necessarily* affords some rent to the landlord." Among the products of the earth which Smith says sometimes do and sometimes do not produce a Rent, are materials of clothing and building, and the produce of mines, coals and metals, and the precious stones.

The manifest self-contradictions of Smith on the subject of Rent, and the importance of the question whether the price of corn would be any lower if the landlords gave up their rents, gave rise to an investigation of the Theory of Rent. It was commenced by a writer named Anderson, who was a practical farmer, and also an extensive writer on agricultural subjects. He also has a title to be remembered by posterity, as the inventor of the two-horse plough without wheels, to which the immense progress of Scottish agriculture is mainly due. In 1777, the year after the publication of the *Wealth of Nations*, a new corn bill was brought into Parliament, and Anderson wrote a pamphlet called "*An Inquiry into the Nature of the Corn Laws*, 1777," for the purpose of advocating a sliding bounty. In the course of this, he shews the entire fallacy of Adam Smith's idea that the payment of rent influences the price of corn. He shews that the price of corn depends entirely upon supply and demand, and that all the variations in price are caused by a change in the relation of supply and demand. He shews well that rents entirely depend on the price of corn, and that any rise in the price would only temporarily benefit the farmer, but ultimately it would entirely go to the landlord.

In a note at page 45 of this pamphlet, he broaches his theory of Rent, which is often supposed to be the origin of Ricardo's Theory of Rent, though they are, as we shall shew, radically different.

"It is not, however, the rent of the land that determines the price of its produce, but it is the price of that produce which determines the rent of the land; although the price of that produce is often highest in those countries where the rent of land is lowest. This seems to be a paradox that deserves to be explained.

"In every country there is a variety of soils, differing considerably from one another in point of fertility. These we shall at present suppose arranged into different classes, which we shall denote by the letters A, B, C, D, E, F, &c., the class A comprehending the soils of the greatest fertility, and the other letters expressing different classes of soils, gradually decreasing in fertility as you recede from the first. Now, as the expense of cultivating the least fertile soil is as great, or greater, than that of the most fertile field, it necessarily follows, that if an equal quantity of corn, the produce of each field, can be sold at the same price, the profit on cultivating the most fertile soil must be much greater than that of cultivating the others, and as this continues to decrease as the sterility increases, it must at length happen that the expense of cultivating some of the inferior classes will equal the value of the whole produce.

"This being premised, let us suppose that the class F includes all those fields whose produce in oatmeal, if sold at 14s. per boll, would be sufficient to pay the expense of cultivating them, without affording any rent at all. That the class E comprehended those fields, whose produce, if sold at 13s. per boll, would free the charges, without affording any rent, and that, in like manner, the classes D, C, B, and A consisted of fields, whose produce, if sold respectively at 12, 11, 10, and 9 shillings per boll, would exactly pay the charge of culture, without any rent.

"Let us now suppose that all the inhabitants of the countries where such fields are placed could be sustained by the produce of the first four classes, viz. A, B, C, D. It is plain that if the average selling price of oatmeal in that country was 12s. per boll, those who possess the fields D could just afford to cultivate them without paying any rent at all; so that if there were no other produce of the fields that could be reared at a smaller expense than corn, the farmer could afford no rent whatever to the proprietor of them, and if so, no rents could be afforded for the fields E and F, nor could the utmost avarice of the proprietor in this case, extort a rent for them. In these circumstances, however, it is obvious that the farmer who possessed the fields in the class C could pay the expense of cultivating them, and also afford to the proprietor a rent equal to one shilling for every boll of their produce; in like manner the possessors of the fields

B and A could afford a rent equal to two or three shillings per boll of their produce respectively. Nor would the proprietors of these fields find any difficulty in obtaining these rents, because farmers, finding they could live equally well upon such soils, though having these rents, as they could upon the fields D, without any rent at all, would be equally willing to take the one as the other.

"But let us again suppose that the whole produce of the fields A, B, C, and D, was not sufficient to maintain the whole of the inhabitants. If the average selling price should continue at 12s. per boll, as none of the fields E and F could admit of being cultivated, the inhabitants would be under the necessity of bringing grain from some other country, to supply their wants. But if it should be found that grain could not be brought from that other country at an average under 13s. per boll, the price in the home market would rise to that rate, so that the fields E could then be brought into culture, and those of the class D could afford a rent to the proprietor, equal to what was formerly yielded by C, and so on of the others; the rents of every class rising in the same proportion. If these fields were sufficient to maintain the whole of the inhabitants, the price would remain permanently at 13s., but if there was still a deficiency, and if that could not be made up for less than 14s. per boll, the price would rise in the market to that rate, in which case the fields F might also be brought into culture, and the rents of all others would rise in proportion.

"To apply the reasoning to the present case, it appears that the people in the Lothians can be maintained by the produce of the fields A, B, C, D, and E, but the inhabitants of Clydesdale require also the produce of the fields F, so that the one is under the necessity of giving at an average one shilling per boll more for meal than the other.

"Let us now suppose that the gentlemen of Clydesdale, from an extraordinary exertion of patriotism, and an inordinate desire to encourage manufactures, should resolve to lower their rents, so as to demand nothing from those who possessed the fields E, as well as those of the class F, and should allow the rents of all the others to sink in proportion. Would the price of grain fall in consequence of this? By no means. The inhabitants are still in need of the whole produce of the fields F as before, and

are under the necessity of paying the farmer of these fields such a price as to enable him to cultivate them. He must, therefore, still receive 14s. per boll as formerly, and as the grain from the fields E, D, C, B, and A are at least equally good, the occupiers of each of these fields would receive the same price for their produce. The only consequence, then, that would result from this Quixotic scheme, would be the enriching one class of farmers at the expense of the proprietors, without producing the smallest benefit to the consumers of grain, perhaps the reverse, as the industry of these farmers might be slackened by these measures.

"If, on the other hand, by any political arrangement the price of oatmeal should be reduced from 14s. to 13s. per boll, it would necessarily follow that all the fields of the class F would be abandoned by the plough, and the rents of the others would fall of course, but with that fall of rent the quantity of grain produced would be diminished, and the inhabitants would be reduced to the necessity of depending on others for their daily bread. Thus it appears that the rents are not at all arbitrary, but depend on the market price of grain, which in its turn depends upon the effective demand there is for it, and the fertility of the soil in the district where it is raised, so that the lowering of rents alone could never have the effect of rendering grain cheaper."

This passage is remarkable as being the first elaborate attempt to explain the theory of rent, but it is manifestly defective because it assumes the necessity of there being different degrees of fertility in the soil of the country. This supposition is entirely superfluous, because rent would arise, even though all the soil was of exactly the same fertility. Ricardo greatly extended it afterwards, by shewing that there were other circumstances which were equivalent to differences of fertility. But the great merit of this passage is the final and conclusive answer it gives to the popular notion, that if landlords went without rents, corn would be any the cheaper.

2. We now come to Ricardo's Theory of Rent. He begins by defining rent to be that portion of the produce of the earth which is paid to the landlord for the use of the *original and indestructible powers of the soil.*[1] The Romans held it to be an

[1] *Principles of Political Economy and Taxation*, p. 53.

evil omen to stumble on the threshold. Any one who has the slightest knowledge of agriculture can see at once that Ricardo's definition of rent is absurd. The earth has no "original and indestructible" powers in the sense he means. The only original and indestructible power that it has, is that of *extent*. There is scarcely any land whatever which is fit for cultivation without a very considerable expenditure of labor or capital, and the powers of the earth are so far from being indestructible, that except in a few favored regions, they wear out very fast, and require a constant renewal of labor and capital to keep it in a fit state for cultivation. He then says,—"It is often, however, confounded with the interest and profit of capital, and in popular language the term is applied to whatever is annually paid by a farmer to his landlord. If, of two adjoining farms of the same extent, and of the *same natural fertility*, one had all the convenience of *farming buildings*, and besides, was properly drained and manured, and advantageously divided by hedges, fences, and walls, while the other had none of these advantages, more remuneration would naturally be paid for the use of one, than for the use of the other, yet, in both cases, this remuneration would be called rent. But it is evident that a portion only of the money annually to be paid for the improved farm, would be given for the original and indestructible powers of the soil; the other portion would be paid for the use of the capital which had been employed in ameliorating the quality of the land, and in erecting such buildings as were necessary to secure and preserve the produce." With respect to this, we may say that rent is the word invariably applied to remuneration paid for the use of houses and buildings, and therefore nothing can be more proper than to include the sum paid for them in rent. With respect to the other things which are necessary for the due cultivation of the farm, to deny the name of rent to the remuneration paid for them, is as frivolous as to say, in speaking of a house, that the word rent is to be restricted to the sum paid for the use of the bare walls, but that the remuneration paid for the painting, papering, fitting-up, and all the decorations, is to be called interest for capital.

Ricardo then says,—"Adam Smith sometimes speaks of rent in the strict sense to which I am desirous of confining it, but more often in the popular sense in which the term is usually

employed. He tells us that the demand for timber, and its consequent high price in the more southern countries of Europe, caused a rent to be paid for forests in Norway which could before afford no rent. It is not, however, evident that the person who paid what he calls rent paid it in consideration of the valuable commodity which was then standing on the land, and that he actually repaid himself, with a profit, by the sale of the timber. If, indeed, after the timber was removed, any compensation were paid to the landlord for the use of the land, for the purpose of growing timber, or any other produce, with a view to future demand, such compensation might justly be called rent, because it would be paid for the productive powers of the land; but in the case stated by Adam Smith, the compensation was paid for the liberty of removing and selling the timber, and not for the liberty of growing it."

This objection of Ricardo's is manifestly of no weight, because rent is in all such cases part of the profits of the produce of the soil, and the distinction made between the remuneration paid for the right of cutting that timber and the right of growing future timber is manifestly futile, because, though the sum paid for that single crop is limited, it is manifestly paid for the use of the productive powers of the earth, so far as regards that crop, just as much as the future produce of the productive powers of the earth.

Ricardo then goes on, "He speaks also of the rent of coal mines and of stone quarries, to which the same observation applies—that the compensation given for the mine or quarry is paid for the value of the coal or stone, which can be removed from them, and has no connection with the original and indestructible powers of the land. This is a distinction of great importance in an inquiry concerning rent and profits, for it is found that the laws which regulate the progress of rent are widely different from those which regulate the progress of profits, and seldom operate in the same direction." The objection taken by Ricardo to Adam Smith has no force whatever. The fact is, that his own definition of rent is purely arbitrary and futile. It is a matter of utter impossibility to distinguish the portion of the remuneration which is paid for the use of the *original and indestructible* powers of the soil, and the portion which is paid as interest of capital expended

upon it. To do that strictly, all the labour which has been expended upon bringing it from a state of nature must be called capital expended upon it, and the remuneration paid for that must be subtracted from the rent. And then what will remain for rent? The fact is, that the separation of rent and profit, as proposed by Ricardo, is a thing that cannot be effected, and is nothing more than a play upon words.

Having thus proposed a definition of rent which is highly incorrect, Ricardo then goes on to explain how rent arises. He says that on the first settling of a country in which there is an abundance of rich and fertile land, a very small proportion of which is required to be cultivated for the support of the actual population, or indeed can be cultivated with the capital which the population can command, there will be no rent. For no one would pay for the use of land, when there was an abundant quantity not yet appropriated, and therefore at the disposal of whosoever might choose to cultivate it any more that he would pay rent for the use of air, and water, or any other of the gifts of nature, which exist in boundless quantities. It is only, then, because land is not unlimited in quantity, and uniform in quality, and because in the progress of population, *land of an inferior quality or less advantageously situated*, is called into cultivation, that rent is ever paid for the use of it. "When, in the progress of society, land of the second degree of fertility is taken into cultivation, rent immediately commences on that of the first quality, and the amount of that rent will depend on the difference of these two portions of land, when land of the third quantity is taken into cultivation, rent immediately commences on the second, and it is regulated as before by the difference of their productive powers. At the same time the rent of the first quality will rise, for that must always be above the rent of the second, by the difference between the produce which they yield, with a given quantity of capital and labour. With every step in the progress of population which shall oblige a country to have recourse to land of a worse quality to enable it to raise its supply of food, rent on all the more fertile land will rise."

Ricardo proceeds,—"rent is always the difference between the produce obtained by the employment of two equal quantities of capital and labour."—"Rent invariably proceeds from the em-

ployment of an *additional* quantity of labour with a proportionally *less* return;" and he then immediately proceeds to say, "When land of an inferior quality is taken into cultivation, the exchangeable value of raw produce will rise, because more labor is required to produce it."

Ricardo's doctrine is—"that corn which is produced by the greatest quantity of labour is the regulator of the price of corn." And, again—"The reason then, why raw produce rises in comparative value, is because more *labour is employed in the production of the last portion obtained*, and not because a rent is paid to the landlord. The value of corn is regulated by the *quantity of labour* bestowed on its production on that quality of land, or with that portion of capital, which pays no rent. Corn is not high because a rent is paid, but a rent is paid because corn is high; and it has been justly observed that no reduction would take place in the price of corn, although landlords should forego the whole of their rent. Such a measure would only enable some farmers to live like gentlemen, but would not diminish the quantity of labour necessary to raise raw produce on the least productive land in cultivation."

3. It is often said Anderson was the originator of the Theory of Rent which Ricardo afterwards adopted and developed. But, on comparing the two theories, it will be seen that though they have one part in common, namely, considering that Rent arises from differences in the fertility of soils, yet they are fundamentally different. Anderson, as a practical farmer, makes the high price of corn to proceed exclusively from the great *Demand* for it. This increased price causes it to be profitable to bring lands of decreasing fertility into cultivation, and consequently the lands which can produce corn at a cheaper rate can afford to pay a Rent. But Ricardo makes the whole price of corn to be regulated by the "quantity of labour" bestowed in obtaining the last quantity produced. Therefore, of course, all the corn produced at a cheaper rate can afford to pay a Rent. Now it so happens that the practical result of both theories is identical, and it is true. It is perfectly clear that the payment of Rent does not in any way influence the price of corn, and consequently if the landlords were to forego their rents, it would not make corn any the cheaper, but the Rents would go into the

pockets of the farmers. But as a question of Science, the Theories are fundamentally distinct: for Anderson's Theory makes the Value of corn to be governed solely by Demand and Supply; Ricardo's Theory by "quantity of labour," or "cost of production."

In both theories, however, differences of the fertility of soils are made the necessary condition of Rent arising, which we shall shew hereafter is an error.

All believers in Ricardo's Theory of Rent make Rent to arise from the differences in the fertility of soils: thus McCulloch says[1]—"The fundamental position laid down by Dr. Smith, that there are certain species of produce that always yield Rent, is contradicted by the widest and most comprehensive experience. Were such the case, rents would always exist, whereas they are uniformly unknown in the earlier stages of society. The truth is that Rent is entirely a consequence of the *decreasing* productiveness of the soils successively brought under cultivation as society advances, or rather of the *decreasing* productiveness of the capitals successively applied to them. It is never heard of in newly settled countries, such as New Holland, Illinois, or Indiana, nor in any country where none but the best of the good soils are cultivated. It only begins to appear when cultivation has been extended to *inferior* lands; and it increases according to the extent to which they are brought under tillage, and diminishes according as their culture is relinquished." McCulloch has a long note at the end of his edition of Smith, but as it contains nothing different from Ricardo, it is superfluous to quote it. McCulloch's observation that Rent does not arise in new countries where there is abundance of fertile land would be easily answered if it were true, because Rent cannot arise until the relation of Landlord and Tenant is established; Rent being the sum paid to a landlord for the use of land: and of course, where there is abundance of land, every one would rather have land of his own than pay rent to a landlord. And in the next place it is not true that Rent does not exist in these new settled countries; because the land in them belongs to the Government, and it is quite usual for the Government to demand a Rent for tracts of land. It is true, some colonies, for the sake of encouraging immigration, do give a certain amount of land free to

[1] *Note to Wealth of Nations, Bk.* i., *ch.* 11.

desirable settlers: but McCulloch's assertion that Rent is *never* paid in new settled countries is wholly contrary to fact.

Mr. Mill goes so far as to call Ricardo's Theory of Rent the *pons asinorum* of Political Economy. He adopts Ricardo's division of the classes of commodities, and says[1]—"The value, therefore, of an article is determined by the cost of that portion of the supply which is produced and brought to market at the greatest expense. This is the Law of Value of the third of the three classes into which all commodities are divided." Again he says—"Rent, we again see, is the *difference* between the *unequal* returns to *different* parts of the capital employed on the soil."—"Thus rent is, as we have already seen, no cause of Value, but the price of the privilege which the *inequality* of the returns to different portions of agricultural produce confers on all except the least favoured portions." Again[2]—"Agricultural productions are not the only commodities which have several *different costs of production* at once, and which in *consequence* of that difference, and in *proportion* to it, afford a rent."

Thus Mr. Mill distinctly makes differences of cost of production the *necessary* condition of Rent arising. We shall see afterwards, however, that he is quite inconsistent with himself as to the regulating law of price, and that in some passages he leans to Ricardo, and in others to Anderson.

4. This Theory of Rent was vaunted as a most wonderful discovery soon after it was published. But it met with a stout antagonist in Mr. Carey, the American Economist. In his first works he dissented from the Theory, but he admitted men began by cultivating the best land first. Afterwards, however, he took up a new position altogether.[3] He maintains that the first settlers in a country always begin by cultivating the inferior soils. He says that the best soils are always covered with immense trees that he cannot fell, or they are swamps that he cannot drain. These, he says, cannot be brought into cultivation till men and Capital increase. But there are always spots of an inferior degree of fertility, on the hill side for instance, where the thin soil has prevented the growth of trees and shrubs,

[1] *Bk.* iii., *ch.* 5, § 1. [2] *Ibid.*, § 3.
[3] *The Past, the Present, and the Future.*

which are always brought into cultivation first, because they afford the readiest return for labour.

Mr. Carey then (p. 17) attacks the Ricardo theory of Rent, and says,—"Nearly 40 years have elapsed since Mr. Ricardo communicated to the world his discovery of the nature and causes of rent, and the law of its progress. The work by means of which it was first made known has since been the text work of that portion of the English community who style themselves *par excellence*, political economists, and anything short of absolute faith in its contents is regarded as heresy, worthy of excommunication, or as evidence of an incapacity to comprehend them, worthy only of contempt. Nevertheless, imitating in this the action of the followers of Mahomet, in regard to the Koran, the professors, one and all, who have undertaken to teach this doctrine, insist upon construing it after their own fashion, and modifying it to suit their own views and the apparent necessities of the case; the consequence of which is, that the inquirer is at a loss to determine what it is that he is required to believe. Having studied carefully the works of the most eminent of the recent writers on the subject, and having found no two of them to agree, he turns in despair to Mr. Ricardo himself, and there he finds in the celebrated chapter on rent, contradictions that cannot be reconciled, and a series of complications such as never before we believe, was found in the same number of lines. The more he studies, the more he is puzzled, and the less difficulty does he find in accounting for the variety of doctrines taught by men who profess to belong to the same school, and who all agree, if in little else, in regarding the new theory of rent as the great discovery of the age. * * * * *

"At first sight, it looks to be exceedingly simple. Rent is said to be paid for land of the first quality, yielding one hundred quarters in return to a given quantity of labor, when it becomes necessary, with the increase of population, to cultivate land of the second quality, capable of yielding but 90 quarters in return to the same quantity of labor; and the amount of rent then paid for No. I. is equal to the difference between their respective products. No proposition could be calculated to command more universal assent. Every man who hears it sees around him land that pays rent. He sees that that which yields forty bushels to the acre pays more rent than that which yields but thirty, and

that the difference is nearly equal to the difference of product. He becomes at once a disciple of Mr. Ricardo, admitting that the reason why prices are paid for the use of land is that soils are different in their qualities, when he would *at the same moment, regard it as in the highest degree absurd, if any one were to undertake to prove that prices were paid for oxen because one ox is heavier than another; that rents are paid for houses because some will accommodate twenty persons and others only ten; or that all ships command freights because some ships differ from others in their capacity!*"

At p. 23, he says, "It will be perceived that the whole system is based upon the assertion of the existence of a single fact, viz., that in the commencement of cultivation, when population is small, and land consequently abundant, the soils capable of yielding the largest return to any given quantity of labor alone are cultivated. The fact exists, or it does not. If it has no existence, the system falls to the ground. That it does not exist; that it never has existed in any country whatsoever; and that it is contrary to the nature of things that it should have existed, or can exist, we propose now to show."

This then, we may say, is the main purpose of this work. Mr. Carey, from a general survey of different countries, maintains that men always have, and necessarily must have, commenced cultivation on inferior soils, and when men and capital increased have then progressed to bring the best soils into cultivation. The reason for this general and sweeping conclusion is, as above indicated, because the best and most fertile lands are always covered with forest or swamp, and the inferior lands free from them. Hence settlers begin with those lands most easily attainable. The universality of this law Mr. Carey attempts to prove. This then is the basis of his theory of Rent, and as seen above it is in diametrical opposition to that of Ricardo. He also maintains that as men and capital increase, and better lands are brought into cultivation, rents rise, and population becomes better off.

Mr. Carey maintains the necessary universality of this course, and he has taken a wide survey of the history of nations in different ages, in all countries of the world, to prove its truth.

Now Mr. Carey has undoubtedly so far succeeded as this. He has certainly completely overthrown the basis of Ricardo's

Theory of Rent, which depends on the universality of men occupying the *best* land first. It is indubitably true that in a great many cases men do begin with the light middling soils first. And this is all that is required by the laws of Inductive Logic. But to assert as a necessary, invariable, and universal law, that men do and must in all cases begin by cultivating the inferior soils is preposterous. In multitudes of cases men did begin cultivation on the best soils. It has often been remarked what a keen eye for good land the monks had. In multitudes of cases the monasteries will be found placed in the centre of the richest and best lands.

Now if there are abundance of cases, as there undoubtedly are, in which men began by cultivating the best lands, that is fatal to the generality of Mr. Carey's theory, just as the instances which he has adduced of men beginning on the light middling lands are fatal to Ricardo's theory. Each of them has perilled his theory on the universality of a particular course of proceeding.

From every general theory all accidental and particular circumstances must be eliminated. The particular state of the case as asserted by Ricardo is sometimes true, and the particular state of the case as asserted by Mr. Carey is also sometimes true; and therefore it is clear that neither is true as a general theory. A true general theory must include them both.

5. Sixteen years ago, when we read Ricardo's Theory of Rent for the first time, we wrote [1]—"Another most abundant source of error is when two phenomena are related to each other, to mistake the cause for the effect. No more striking instance of this can be selected than the Theory of Rent propounded by Mr. Ricardo. In a few words, Mr. Ricardo's axiom is that the expense of raising corn on the worst land in cultivation will determine the average price of wheat, and afford and measure the rent of lands of a superior quality. . . . Notwithstanding these authorities, we have no hesitation whatever in saying that the Ricardo Theory of Rent is a mere delusion; and that it is fundamentally erroneous, inasmuch as it inverts the relation of cause and effect. From an intimate knowledge and observation of the action of prices in an agricultural district, and the views

[1] *Theory and Practice of Banking, Vol.* i., *Introduction, p.* 12. *Edit.* 1855.

of farmers in taking farms, we have no hesitation in saying that it is *not* the cost of cultivating the worst lands which determines price, but the precise reverse, and *that it is the average value or price of corn which determines the worst quality, and most ill-situated land that can be cultivated with a profit, and also decides whether there can be any rent for it.* . . . . It is evident that this is no mere piece of vain logomachy, but is the very root of the matter; we have no hesitation in saying that Ricardo has inverted cause and effect, and that the whole Theory of Rent based upon this erroneous axiom, is a delusion and a chimera, and that any course of action based upon so fallacious an axiom, would infallibly lead to results precisely the reverse of what was intended and expected."

This we wrote from our own practical knowledge of the subject. Since that work was published, we have found that J. B. Say has urged exactly the same objection against Ricardo's Theory of Rent. Say says[1]—"We shall see further that it is the same false conception of the origin of value which is the basis of Ricardo's Theory of Rent. He pretends that it is the cost which is obliged to be made to cultivate the worst lands, which makes a rent to be paid for the better ones, whereas it is the wants of society which gives rise to the demand for agricultural products, and raises the price of them sufficiently high for the farmer to make a profit to pay the owner of the land for the right of cultivating it."

And this view, which is exactly the same as ours, he enforces further on.[2]

So also Dr. Chalmers points out exactly the same fallacy[3]—"It is a signal error in a recent theory of Rent that the difference of quality in soils is the efficient cause of it. . . . In affirming that it is the existence of this inferior land which originates the rent, there is a total misapprehension of what may be termed the real Dynamics of the subject." And at p. 330, he says—"The error of the Ricardo system of Political Economy on the subject of rent has been well characterized by Mr. T. Perronet Thompson as the fallacy of inversion. It confounds the effect with the cause. It is not because of the existence of

[1] *Traité, p. 57 note.* [2] *Ibid., p. 410. See also Cours, Part* ii., *ch.* 2.

[3] *On Political Economy in connection with the moral state and moral prospects of Society. Appendix.*

inferior soils that the superior pay a rent, but it is because the superior pay a rent that the inferior are taken into occupation."

Lastly we may cite the opinion of the learned Judge, Mr. Justice Byles in the testimonial he gave us[1]—"I observe that in your economical writings you have assailed Ricardo's Theory of Rent. Fifty years ago I not only read Ricardo's book, but actually abridged it. Subsequent reflection and observation have convinced me that that theory is unsound, as indeed, is most of his book." We are happy to cite these testimonies all agreeing with our judgment.

6. We have seen that Anderson and Ricardo with his followers McCulloch and Mr. Mill all make Rent to arise from *differences* in the returns to Capital, either from difference of fertility, situation, or differences of Capital applied to the same soil. And unless there were these differences of returns, it is manifest from the extracts given from these writers, that according to their theory, there could be no such thing as rent. Now let us suppose some vast plains of illimitable extent on the earth's surface, all of uniform fertility, with markets thickly distributed over them so that their situation is uniform, and also equal amounts of capital expended on the soil; such as the plains of Bengal, or Lombardy, or such as the plains of South America along the Amazons might be. Now in such a country as this could not there be such a thing as Rent? According to the doctrine of Ricardo, McCulloch, and Mill, there could not be such a thing as Rent in such a country! The very statement of such doctrine is enough to call forth the amazement and ridicule of any practical man of business.

7. We have now to develope the Theory of Rent which is independent of *differences* of fertility, or *differences* of situation, or of *differences* of return to Capital.

First: What is the first thing necessary in order that Rent should arise?

It is that the relation of Landlord and Tenant should exist: Rent is the sum paid by one person to another for the use of land; hence unless the land is owned by one person and let to another, there can be no such thing as Rent.

[1] *Preface, p.* xvi.

Secondly: From what does the possibility of Rent being paid arise?

It arises from this, that a few persons, especially with the assistance of horses, cattle, and agricultural implements can raise from the earth a very much larger amount of produce than is necessary for their own subsistence.

Thirdly: Let us consider when, or under what circumstances, Rent will arise.

Let us suppose that there is a large tract of country belonging to a landlord, either the State, or a private person, and comprising many different kinds of soil of varying fertility.

Now suppose that any portion of this soil is parcelled out among families in such a way that each family has got only just exactly enough for its own subsistence. These placed on the better lands will of course require a smaller amount of land than these placed on inferior lands.

Now if the land were parcelled out in this way, it is manifest that these families could pay no rent for the land, because they have no surplus produce to pay, as rent.

Again, let us suppose the same land parcelled out among a number of families, each with a very much larger portion of land in their possession than is necessary for their subsistence. Then as each family would be able to maintain itself entirely on its own land, it is evident they could pay no rent, as there would be nobody to purchase any produce they might raise above their own wants. (Supposing that they did not export it to foreign markets.)

Supposing while the land is parcelled out in this way, a town springs up. Then of course the inhabitants of the town cannot raise food for themselves, and the tenants in the country would find it profitable to grow food to sell to the dwellers in the town.

Of course when the town was very small the demand would be very small, and therefore the price low; and therefore it would only pay to bring in corn from the land nearest the town. But as the numbers in the town increased, the demand would increase, the price of the corn would increase, the rent of the land nearest the town would increase, and then it would pay to bring corn from the second zone of land. As the town continued to increase, the demand would still more increase, the

price would go higher still, the rent in the first and second zones would increase, and then it would pay to bring the corn from the third zone, and so on.

It is also clear that if there were only *one* centre of population, the price of the corn arising from the demand, would indicate the greatest cost that could be incurred in bringing the corn to market. And as this cost increased, there would be a zone from which it would just pay with ordinary profits to bring the corn to market, but which could pay no rent.

Now Ricardo says that it is the cost of producing the corn from this outmost zone which *regulates* the price of all the corn sold in the market.

We say it is manifestly exactly the reverse.—It is the price of the corn in the market which indicates the position of this zone.

Ricardo says [1]—"When in the progress of society land of the second degree of fertility is taken into cultivation, rent immediately commences on that of the first quality."

We say it is exactly the reverse, and that it is—When rent commences on land of the first degree, land of the second degree will be taken into cultivation.

Ricardo says—"When land of the third quality is taken into cultivation, rent immediately commences on the second. At the same time the rent of the first quality will rise."

We say it is exactly the reverse, and that it is—When in the progress of society the price of corn rises, the rents on the first and second qualities will rise, and then the third quality will be taken into cultivation.

Ricardo says—"When land of an inferior quality is taken into cultivation, the exchangeable value of raw produce will rise, because more labour is required to produce it."

We say that the sentence should have been written thus—"When the exchangeable value of raw produce rises, land of an inferior quality will be taken into cultivation, because more labour may be profitably employed to produce it."

Ricardo says—"The value of corn is regulated by the quantity of labour bestowed on its production or that quality of land, or with that portion of capital, which pays no rent."

We say it is exactly the reverse and that—The value of corn

[1] *Principles, ch.* ii., *on Rent.*

indicates the worst quality of land upon which labour may be bestowed without paying rent.

Ricardo says—"That corn which is produced by the greatest quantity of labour, is the regulator of the price of corn."

We say it is exactly the reverse, and—That the price of corn indicates the greatest cost which will be employed in producing corn.

8. Now we have supposed only one centre of town population: and under such circumstances rents would no doubt progressively diminish till they vanished. But what need of supposing only one centre of town population? Let us suppose that there are any number of towns and markets spread all over the country. Then of course these numerous towns will tend to equalize Rents all over the country; and like as in Lombardy, we may suppose them so nearly equally spread over the country that differences of situation are practically annihilated. We may also suppose that equal portions of Capital have been applied to the land: so that the circumstances of an indefinite extent of country are absolutely equal. Now as long as the circumstances of the different parts of the country are different, Ricardo, McCulloch and Mr. Mill allow that Rents may exist; but as soon as the circumstances are absolutely equal all over the country—the possibility of there being such a thing as Rent ceases to exist!!

Now such is the logical conclusion of the Ricardo Theory of Rent! and we simply ask can such a doctrine be received by any sane man?

We, thus, by this means, eliminate differences of fertility, situation, or application of capital, from the Theory of Rent.

What then are the circumstances under which Rent arises? They are these—

1. That the land must belong to a landlord, and be let to a tenant.

2. That the tenant shall have in his possession a larger amount of land than is necessary for his own maintenance.

3. That the population in some parts of the country be collected in such dense masses that they cannot grow corn for their own subsistence on the land they occupy.

4. That the population in other parts of the country be

scattered so widely that they cannot consume the produce of the soil, but they may sell some of it to the town population.

Under such circumstances the tenants in the country can give their landlords a share of the profits made by selling the corn to the townspeople, and that share is called Rent.

9. Moreover the payment of Rent has no influence on the price of corn, because it is not part of the *cost of production*, but it is a *share of the profits.*

The proof of this will be an excellent example of the truth of the General Equation of Economics we established in a former chapter: it will also well exemplify a principle of great importance in the Theory of Taxation.

In many foreign towns an *octroi*, or custom house, is placed at the gates, at which duties are levied on all articles of food brought into the town.

Now suppose A keeps a farm outside the town, and brings his produce to the market. He is charged an *octroi* duty at the gates. This duty is part of the cost of production, *i. e.*, of placing the produce in the market for sale. Hence he will add the duty to the price of the article, and the townsmen must pay it. Hence of course a tax on the product will raise its price.

Now if A is the possessor of the farm by himself, he will reap all the profits made by it. If he has a partner B, the same quantity of produce is brought into the market; but A and B will share the profits between them. A, no doubt, will have a less profit than if he was sole owner of the farm. But it is quite evident that because A has a partner B, and must share the profits with him, that can have no effect on the price of the produce. For this reason—the same quantity is raised from the farm and offered in the market, and there is the same demand for it. Hence it is clear that *a tax on the product raises the price of the product, but a share of the profits will not.*

Now suppose A and B are landlord and tenant. Then the produce is raised and brought to market; and the tenant pays the landlord a stipulated share of the profits. That cannot have any effect on the price of the produce, because it neither alters the demand nor the supply. Hence the price of corn cannot be affected whether a single person produces it, or whether two do so in partnership. That is to say, it has no effect on the price of

corn whether one person produces it, or whether two produce in partnership. Hence in strict accordance with the theories of Anderson and Ricardo, it is perfectly proved that if the landlords were to forego their rents, it would have no effect on the price of corn, but the price would simply go into the pockets of the farmers.

10. It is very strange that Ricardo, who agreed that Rent does not influence the price of corn, maintains that Tithes do. He says[1]—"Tithes are a tax on the gross produce of the land, and like taxes on raw produce, fall wholly on the consumer." Now it is quite manifest that Tithes are a share of the produce, just as rent is. If a farmer has to pay tithes as well as rent, it is quite clear that the produce of the farm is divided into three parts instead of two. But still the same Supply is brought to market, and there is the same Demand for it. Therefore its price cannot be altered. The produce is shared between the Landlord, the Tenant, and the Parson, but that can have no effect on price. Therefore the distinction made by Ricardo between Rent and Tithes is entirely erroneous. The distinction between a Tax on the Produce and a Share of the Produce, or the Profits, will be found to be of the greatest importance hereafter in the Theory of Taxation.

11. Now although we have arrived at exactly the same practical result as Ricardo, yet this is no immaterial dispute about words, it is not mere logomachy, but it is a fundamental difference of principle between two distinct systems of Economics. What we say is, that Ricardo has plainly inverted cause and effect. That his views and principles are as entirely fallacious as if he had composed a treatise on heat, and laid it down as a fundamental principle, that it is the rise of the mercury in the thermometer that regulates the heat of the atmosphere, or that the rise of the mercury in the barometer *causes* fine weather. And those who admire Ricardo's principles of Political Economy, ought in consistency to maintain the two latter propositions.

It is so extremely important to understand the nature of the fallacy which runs through the whole of the Ricardian system of

[1] *Principles, ch.* 11.

Political Economy, that we may give another illustration. It is well known that the cultivation of certain agricultural products, and the climate they can flourish in, are intimately connected. At certain points the cultivation of maize, the vine, olives, the palm, ceases, and it is possible to ascertain by experience the average temperature of the country in which these things occur. Now, reasoning exactly as Ricardo does, we ought to say, that the boundaries of the cultivation of these products *regulate* the climate of that place; when it is manifestly the reverse, it is the climate that *regulates* their production. The cultivation of a certain vegetable may *indicate* the climate, but it does not *regulate* it, any more than the speed of the paddle wheels regulates the motion of the engines. The whole of Ricardo's palpable fallacy is based upon a misconception of the meaning of *to regulate*.

Or again, there is a certain kind of letter weight which indicates the weight of the letter by raising a series of weights in succession; now it is quite clear that it is not the last weight raised which *regulates* the weight of the letter; but the weight of the letter which regulates which is the last weight which will be raised.

We must stop here for the present, and defer many important considerations till the next chapter. We have now shewn the entire fallacy of the Ricardo Theory of Rent; and brought the class of commodities it relates to, under the dominion of the General Equation of Economics. That the Ricardo theory should be true was contrary to the whole analogy of Physical Science. But the Principle of the Continuity of Science is completely vindicated, and there is seen the beautiful conformity between the Principles of Natural Philosophy and Reality, and a great triumph for the prophetic genius of Bacon.

END OF VOLUME I.

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